

Plentree's conservation App and Responsive Website

Raffay bin Moazzam

Project overview



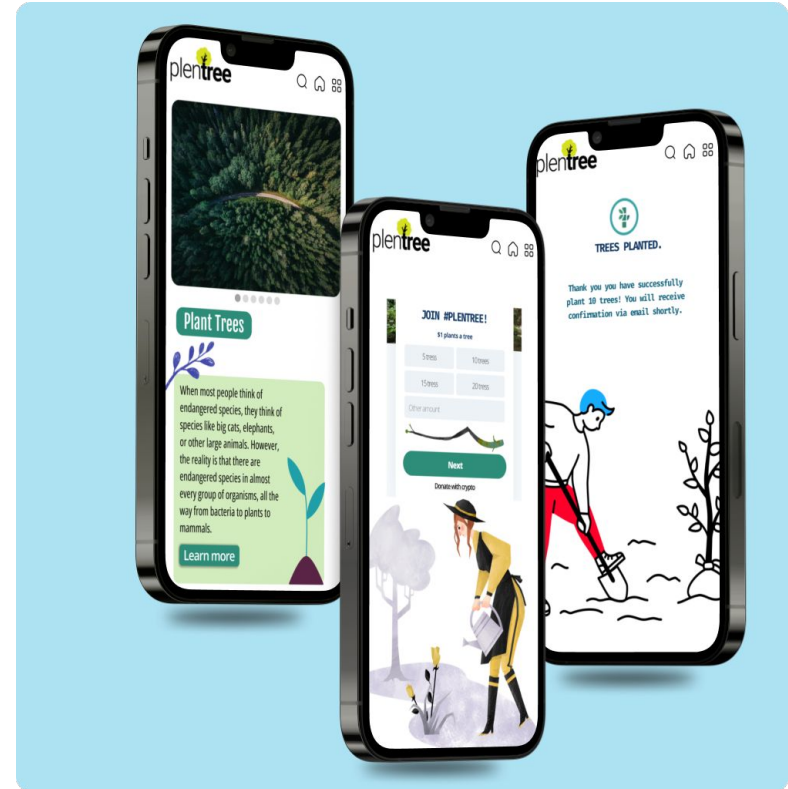
The product:

Plentree is a US-based organization focused on preservation of endangered species of trees all around the world . The organization needs a tool that helps people learn about and plant the trees where they can grow back and doesn't become extinct anytime. Plentree's primary target users include college students and adults who are concerned about the Earth and giving back to nature they waste and would like to learn more about what they can do in protection and preservation of the nature .



Project duration:

March 2022 to September 2021



Project overview



The problem:

The loss of trees and other vegetation can cause climate change, desertification, soil erosion, fewer crops, flooding, increased greenhouse gases in the atmosphere, and a host of problems for indigenous people.



The goal:

Design an app that will improve education on the topic of endangered species of plants and orchard trees. And a website from which people can donate for the conservation of vegetation.

Project overview



My role:

UX designer leading the app and responsive website design from conception to delivery



Responsibilities:

Conducting interviews, paper and digital wireframing, low and high-fidelity prototyping, conducting usability studies, accounting for accessibility, iterating on designs, determining information architecture, and responsive design.

Understanding the user

- User research
- Personas
- Problem statements
- Competitive audit
- Ideation

User research: summary



I used plentree's data on deforestation to develop interview questions, which were then used to conduct user interviews. Most interview participants reported feeling badly about deforestation, and they wanted to act and reduce cutting up trees. The feedback received through research made it very clear that users would be open and willing to work towards conserving the vegetation if they had access to an easy-to-use tool to help guide them and even for donating on the go .

Persona 1: Assam

Problem statement:

Assam is a passionate student who needs knowledge about endangered species of trees, help restoring plants, and spreading awareness with the local community for the preservation and restoration of the nature.



Assam

Age: 22

Education: Freshman

Hometown: Murton, Durham

Family: 1 younger brother
and parents

Occupation: Student

"If you truly love nature, you will find beauty everywhere."

Goals

- Help restoring plants in local community
- Get knowledgeable and endangered species of tree
- Plant trees on the go with the help from a mobile app

Frustrations

- Lack of awareness in the community and everyday woodcutters
- Lack of government affects to preserve the endangered species of trees
- No app or website for donating in planting trees in different areas

Assam is a 22 Freshman student from Murton, Durham England. Assam is really passionate about giving back to nature and restoring different species around is area. He recently worked with team trees (a campaign to plant 1 million trees by some well renowned youtubers) to plant 1000 trees in his hometown and wants to see something similar to that in all parts of the world. Assam wants an app from which people can educate about the natural cases of deforestation and endangered species of tree so that everyone knows what to do in persevering them.

Persona 2: Maha

Problem statement:

Maha is an environmental scientist who spends her time educating people about negative causes of deforestations. Maha needs an app to make her job easy and quick so that not just only she can educate people via it but also guide them what they should do for the conservation of nature on their end.



Maha

Age: 22

Education: BS Environmental sciences

Hometown: Portland, Oregon

Family: Single

Occupation: Environmental scientist

“Forget not that the earth delights to feel your bare feet and the winds long to play with your hair”

Goals

- Want to see earth green and dense with nature
- Help out local people in persevering endangered species of animals and plants
- Want to educate people want planting trees and how to protect them

Frustrations

- Lack of resources and articles available online for educating people
- Increase in number of deforesting

Maha is a 22 year Environmental scientist from Portland Oregon. Maha spending her time educating people about protection and conservation of animals and plants in her community. Maha is a really joyful and nature loving person. People know and respect her for her effects for the wildlife preservation. Maha always encourages people around her in rehabilitation of wildlife. Maha really wish or an app from which she can easily teach people about the endangered species of trees and can donate to plant certain trees from the same app

Competitive audit

An audit of a few competitor's products provided direction on gaps and opportunities to address with the Tree conservation app.

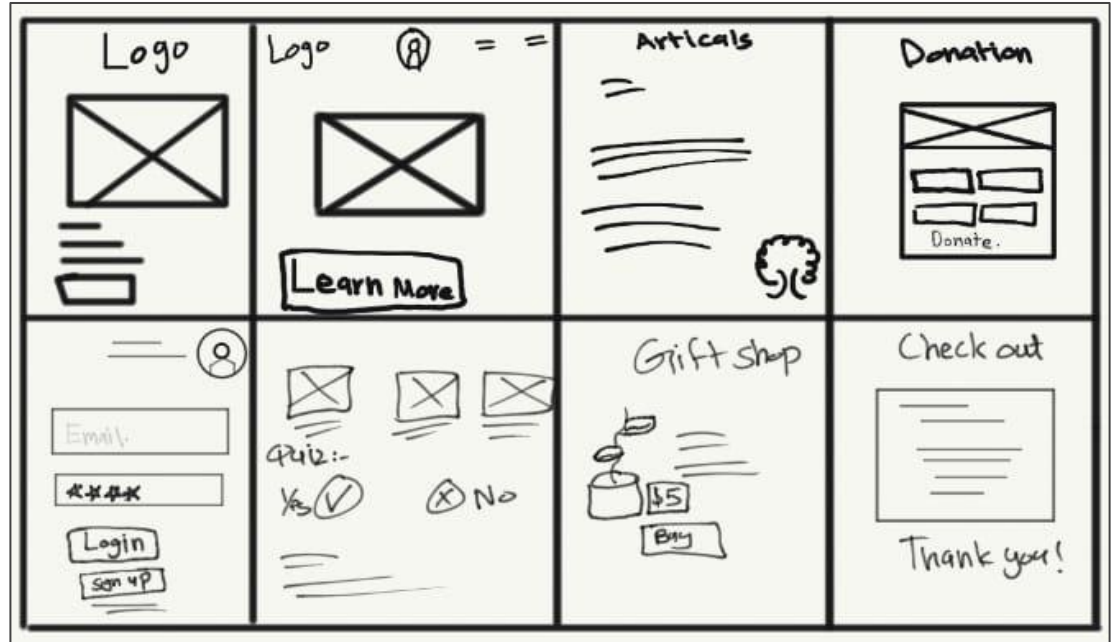
Competitive audit								
Competitive audit goal: Identify and understand the effectiveness of products and features currently used to fight for deforestation.								
General information								
	Competitor type (direct or indirect)	Location(s)	Product offering	Price (\$ - \$\$\$\$)	Website (URL)	Business size (small, medium, large)	Target audience	Unique value proposition
The International Rhino Fund (IRF)	Indirect	In major cities of Asia and Africa	App and website for funding and operating Rhino conservation programs	\$\$	https://rhinos.org/	medium	Families and animals lovers	"Creating a world where Rhinos thrive in the wild"
WWF	Direct	In every part of the world	App and website that educate people with about wild life and for donations	\$	https://www.worldwildlife.org/	larger	Parents and families	"Protect the diversity of life on Earth and the future of nature"
Team trees	Direct	In every part of the world	Website for donating to plant trees in different areas around the world	\$	https://teamtrees.org/	larger	Young, highschool students, college students	"JOIN THE MOVEMENT"

Competitive audit				
	First impressions			
	Desktop website experience		App or mobile website experience	
The International Rhino Fund (IRF)	Okay + Informative, Easy to navigate - visual design is outdated		Needs work + All features are useful + Easy to navigate	
WWF	Good + Strong branding and visual design + Easy to navigate + Familiar design		Okay + Familiar design - App is large in file size	
Team trees	Outstanding + Update UI elements + Easy to navigate		NA -NA -NA	

Competitive audit				
	UX			
	User flow		Visual design	
The International Rhino Fund (IRF)	Good + Information reading process stright forward + Easy to find menus		Needs work - Inconsisten Font usage - Low quality pictures	
WWF	Great + Sign up process is simple - Some menus are hidden far away in app		Outstanding + Strong brand identity reflected throughout design + Great high Quality Pictures	
Team trees	Outstanding + Donations are really easy to make + Presets of donations are upfront		Good + Great Font styles + Amazing Color Scheme	

Ideation

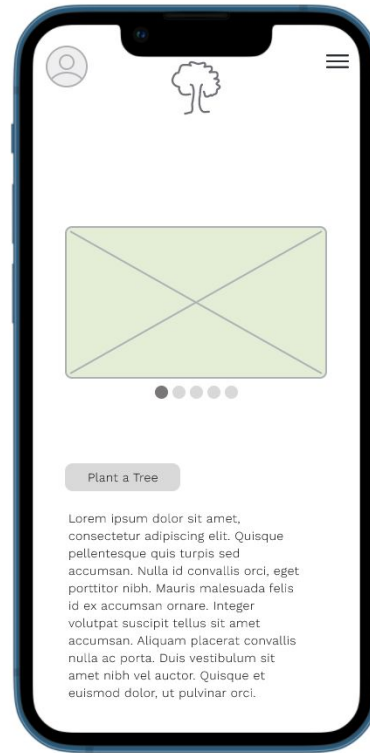
I did a quick ideation exercise to come up with ideas for how to address gaps identified in the competitive audit. My focus was specifically on **information regarding endangered species of trees and donation options.**



Digital wireframes

After ideating and drafting some paper wireframes, I created the initial designs for the Plentree's app. These designs focused on delivering guidance to users regarding endangered species trees and donating for the conservation and plantation of them.

Top half of home screen contains a image carousel that feature environmental issues and pictures of endangered species of trees.

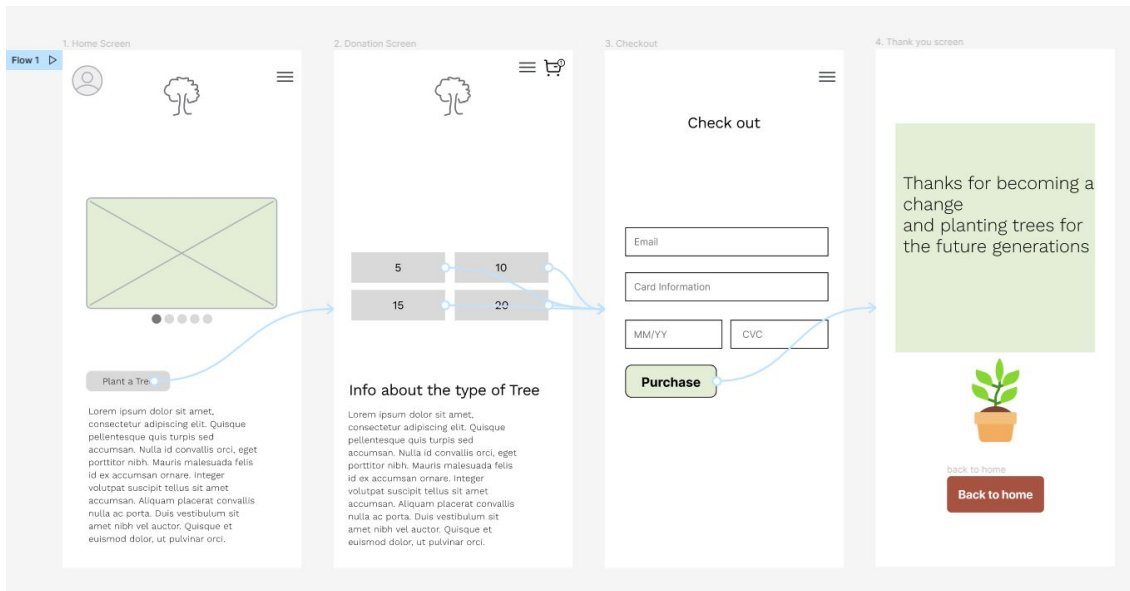


Easy access to Donate button is up-front in the app so that is easy for all kinds of users to donate without searching for it deep inside the menus

Low-fidelity prototype

To prepare for usability testing, I created a low-fidelity prototype that connected the user flow of planting trees.

View [Plentree's low-fidelity prototype](#)



Usability study: parameters



Study type:

Unmoderated usability study



Location:

America, Tree convention 2022



Participants:

5 participants



Length:

30-90 minutes

Usability study: findings

These were the main findings uncovered by the usability study:

1

Donations

People want easy access to donation options so that maximum number of people can donate without going through menus searching for it .

2

Informations

People had difficulty in find the articles on the endangered species of trees.

3

Deforestation

People wanted an option for reporting illegal cutting of trees and deforestation activities to the authorities .

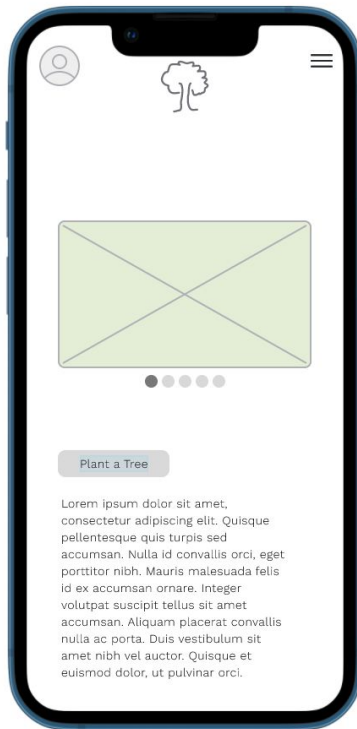
Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

Mockups

Based on the insights from the usability studies, I applied design changes like providing a learn more button which will take users directly to information and articles regarding currently endangered species of trees and orchard trees.

Before usability study



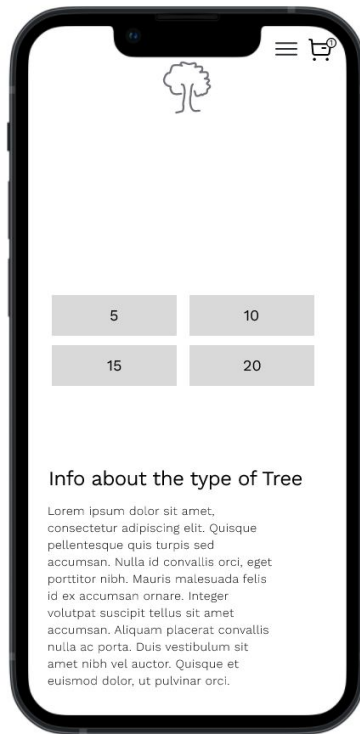
After usability study



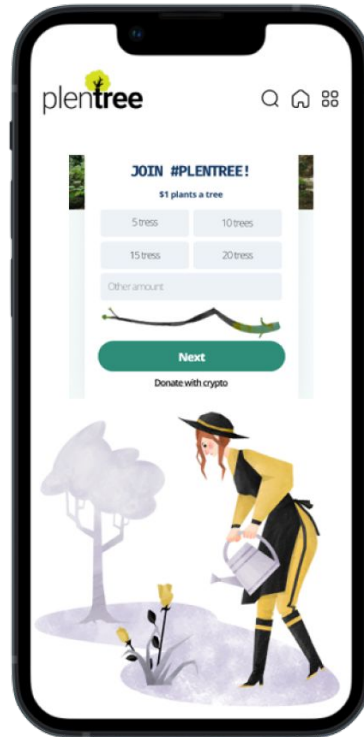
Mockups

Additional design changes included adding a new payment method “Donate with crypto” to the “Check out” page, and providing a distinct indication by underlining it so that people can clearly identify the availability of the method and donate via if they prefer to do so.

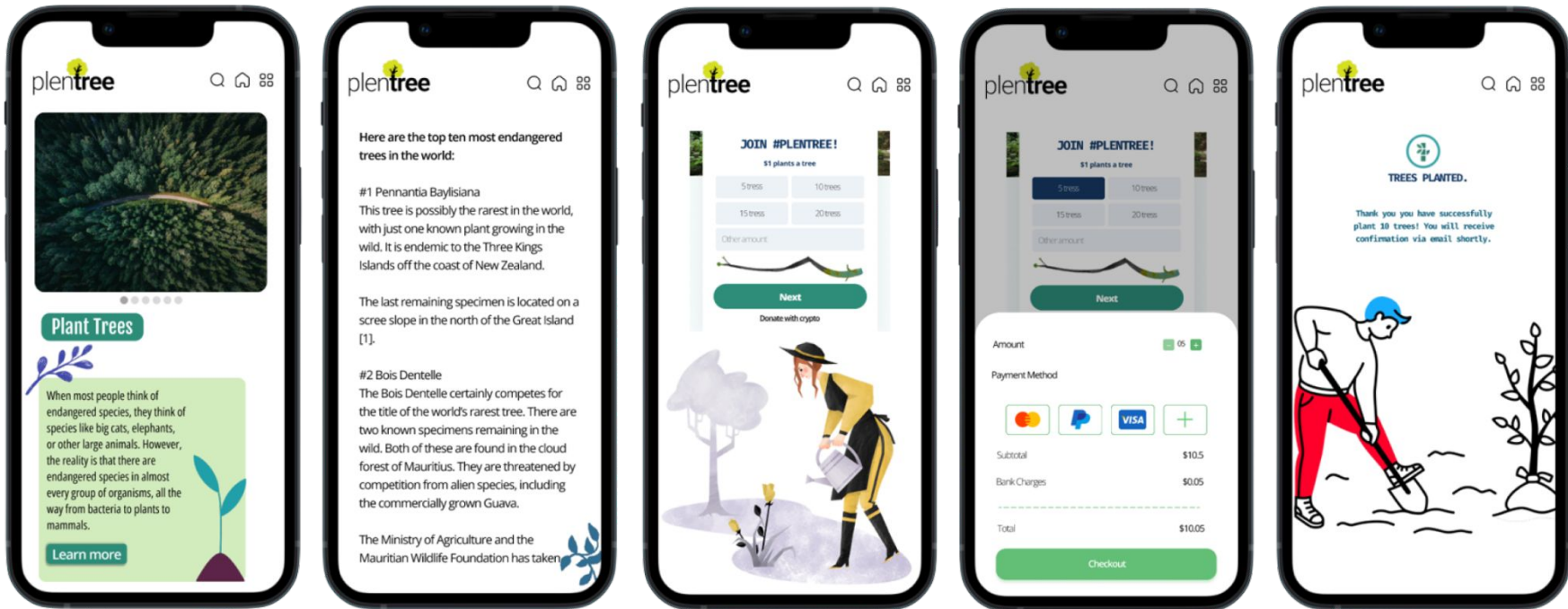
Before usability study



After usability study



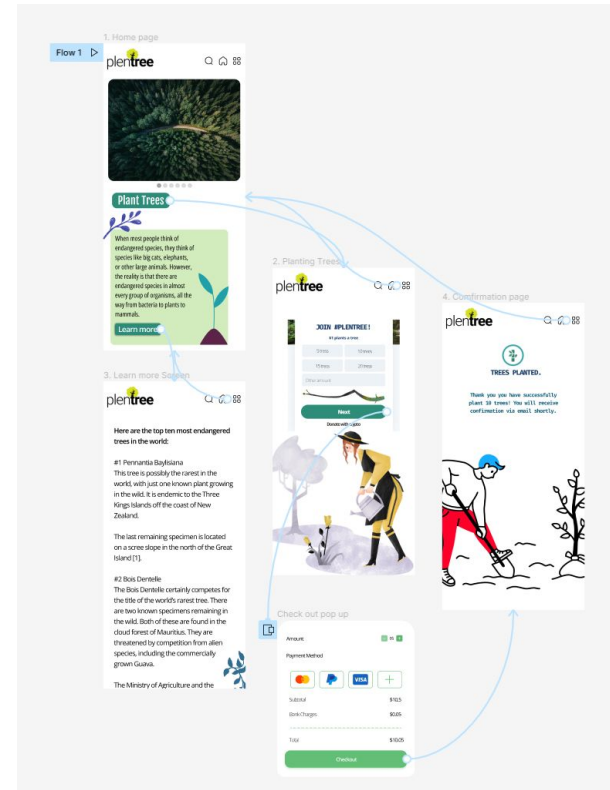
Mockups



High-fidelity prototype

The high-fidelity prototype followed the same user flow as the low-fidelity prototype, including design changes made after the usability study.

View the [Plentree's high-fidelity prototype](#)



Accessibility considerations

1

Clear labels for interactive elements that can be read by screen readers.

2

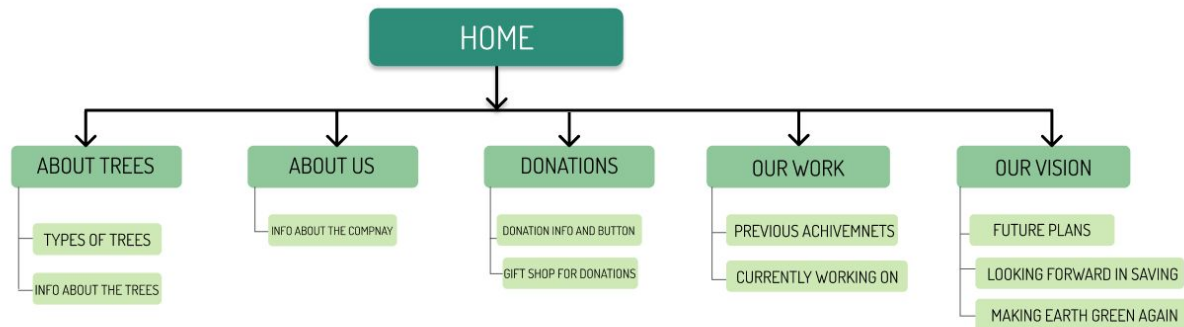
Initial focus of the home screen on personalized recommendations help define the primary task or action for the user.

Responsive Design

- Information architecture
- Responsive design

Sitemap

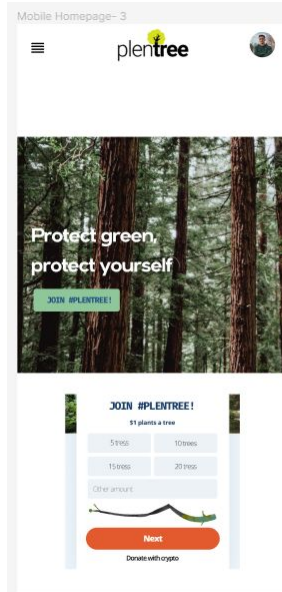
With the app designs completed, I started work on designing the responsive website. I used the Plentree's sitemap to guide the organizational structure of each screen's design to ensure a cohesive and consistent experience across devices.



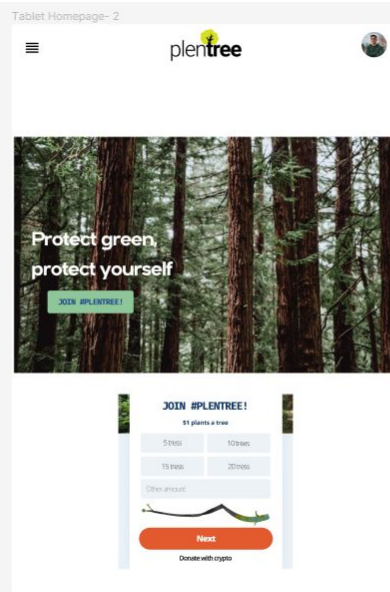
Responsive designs

The designs for screen size variation included mobile, tablet, and desktop. I optimized the designs to fit specific user needs of each device and screen size.

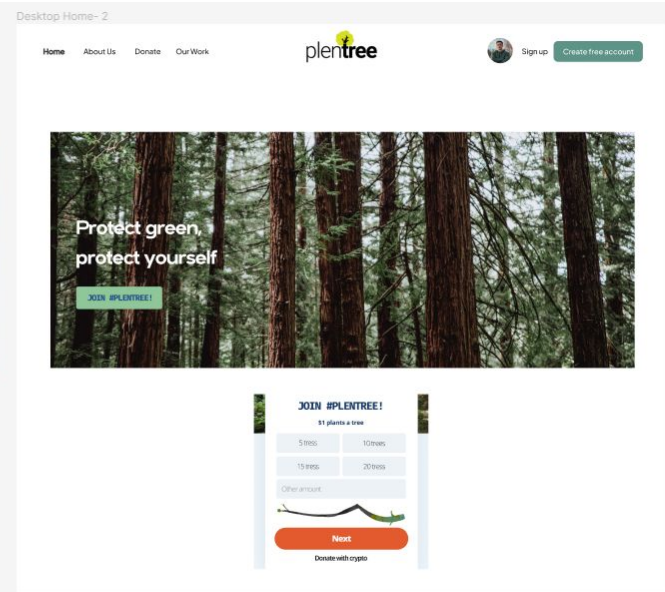
Mobile website



Tablet



Desktop



Going forward

- Takeaways
- Next steps

Takeaways



Impact:

Because of the app Plentree have collected over 200,000\$ for plantation and conservation of the trees within 3 months which means 200,000 new trees will be planted. quote from peer feedback was that “the Plentree’s app helps bring caring about the environment to a personal level in a way that’s easy and engaging.”



What I learned:

I learned that even though the problem I was trying to solve was a big one, diligently going through each step of the design process and aligning with specific user needs helped me come up with solutions that were both feasible and useful.

Next steps

1

Conduct research on how successful the app is in reaching the goal to plant 1 million trees by the end of the year.

2

Add more educational resources for users to learn about plantations and nature.

3

Provide incentives and rewards to users for voluntarily working with Plentree.

Let's connect!



Thank you for your time reviewing my work on the Plentree's app! If you'd like to see more or would like to get in touch, my contact information is provided below.

Email: Raffay777@hotmail.com