Indigena

grow native plants

Figma Designs

Introduction

Indigena is an app that helps local gardeners and farmers plant native plant species. It provides information on which species to plant, how to plant them, and their impact on local pest and animal populations.

Why is this important?

Many people don't realize that most of America's natural landscape was once vast grasslands, not the woody forests we see today. While there were some forests in North America before Europeans arrived, they were much less extensive than the grasslands.

European colonists brought their familiar European trees with them and planted them in large numbers. This led to a decline in native grassland ecosystems.

While humans can adapt to different landscapes, the original native animal and plant species cannot. The decline of native grasslands has caused an ecological imbalance, resulting in overgrowths, invasive species, and competition. There is now an overwhelming number of pest species attacking farmer's crops, and the natural ecological systems that once kept them at bay have been disrupted.

Planting native plants can help to restore our native grassland ecosystems and regulate animals, plants, pests, and people.

Objectives

1. **Have a working front-end with dummy data**
   a. Starting with design and implementing it with flutter
   b. Implement filler data at first for a proof of concept
2. **Gather plant data from the local area (Troy region)**
   a. Gather real data on plants in general to create a plant database that can be filtered through
3. **Fill in the front-end with the data from Troy**
   a. Implement the real gathered data into the front end

Materials and Methods

Stack: Flutter, Android Studio, Github, VSCode

Flutter is being used as both front-end and back-end. Android Studio is being used to simulate an Android device on my laptop.

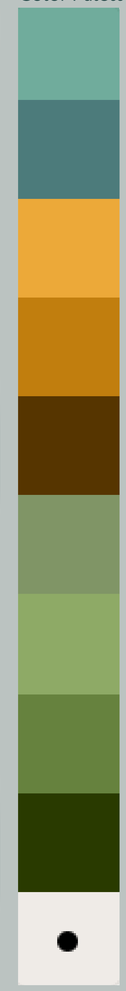
Results/Progress

Design in Figma:
The majority of the project this semester was taken up by design work in Figma. This was not my first time using Figma so I was already vaguely familiar with the functionality. I had also worked on the development of apps previously so I had some experience in what they should look like. I looked into various other plant apps on the Play Store for inspiration and to take notes on what those apps did well and what they did not. I figured that the majority of plant apps are not very user-friendly and are also not especially pleasing to the eye. With these in mind, I began designs with the logo and the color scheme. The final color scheme (after testing out many) was decided to be as shown below
With this, I wrote out the functionality of the app and all the features that I wanted it to include. I checked in with the team to make sure it made sense and then began designing the desired pages in Figma. These designs are all pictured above. The app is designed in order to help farmers and all curious folk on planting native. There is a Landing Page that includes a search bar to enter the user's location which then leads them to the Biome Page in which they are informed of their native biome and a basic description about it. On this page, they have the ability to navigate to one of 3 search pages, the Plant Search Page, Is It Native? Page, and the Problems Search Page. The Plant Search Page entails of a basic plant search feature through the database of plants. The user may click on a plant in the list, bringing them to a page that goes into detail about the plant. The Is It Native? Page is a search page where the user may search for a plant and find out if the plant is native or not to the area, providing alternatives if the plant is not native. The Problem Search Page allows users to search "issues" that they have in their garden (mosquitoes, moles, aphids, etc) and it will provide a list of suggested native plants to help combat the issue.

Implementation in Flutter:
I successfully implemented the Landing Page in Flutter and I am in the middle of implementing the Biome Page. There are some overflow issues with the implementation right now and so it has temporarily halted. Other than that, the base implementation is going very smoothly and it is very convenient to have an already-designed front-end in Figma to base all expectations off of.

Next Steps:
Finishing the implementation in Flutter and finishing all design work is the current priority.. Although I am very anxious to jump into gathering data and making it a usable app, the base must be completed carefully for things to remain smooth during implementation.

Color Palette



Conclusions

Here's what I've learned so far:

1. **Design is hard work!**
   a. Designing the color palette and the overall look of the app has been super fun but also a huge time sink. It has taken up the entire semester and I still am not fully done with it.
2. **Make more realistic goals**
   a. I need to be more honest with myself in terms of setting goals for the semester. Although it all sounds possibly doable for one semester, realistically all of my goals were quite high reaches for a 1 person project.
3. **Less perfection, more progress**
   a. I tend to be a perfectionist about what I am doing which slows a lot of my progress. I spent a lot of time this semester trying to perfect the design of the app which made me lose sight of the actual purpose of the project.

References

Flutter Docs:
https://docs.flutter.dev/
Stack Overflow:
https://stackoverflow.com/questions/tagged/flutter
Figma Learn:
https://help.figma.com/hc/en-us

Acknowledgements

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