Houseplant Assistant Web Application

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Git Repo:
https://github.com/CMPT-276-FALL-2024/project-02-peaks

1st November 2024

Project Overview

The Houseplant Assistant is a web app designed to help users manage the care of their houseplants, including watering, fertilizing, and lighting needs. During the COVID-19 pandemic, many people turned to houseplants as a hobby while spending more time at home. However, post-pandemic, people became busier, leading to plant neglect despite their desire to maintain the hobby. This app creates personalized schedules, allowing busy users to effortlessly keep up with plant care even with a hectic lifestyle. It's also a great tool for beginners or those wanting to start their plant journey by making the learning process less intimidating.

Personas

Jason

Demographics:

Age: 40
Education: Bachelor's degree in Registered Nurse
Occupation: Emergency nurse
Family: Single man living alone.
Background:

- Works 50+ hours per week.
- Loves plants and owns multiple houseplants.

Computer proficiency: Intermediate
Challenge:

- Can only dedicate 10 minutes a day to plant care due to a busy schedule.
- Has trouble recalling what each plant needs after his long shifts.

Trigger:

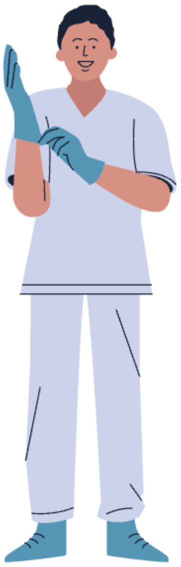
- Accidentally overwatered some plants and underwatered others.

Characteristics:

- Heavily relies on website reminders for caring for his plants.

Goals:

- Wants to take good care of his plants with a minimum amount of effort and time.



Jessica

Demographics:

Age: 19
Education: High School
Occupation: First year CS student
Family: Lives with parents, who have no experience with plants
Background:

- got some houseplants for the first time 2 months ago.
- Has no experience or knowledge of plants at all.

Computer proficiency: Intermediate to advanced
Challenge:

- Could not figure out the optimal light intensity and watering amount for her plants.
- Intimidated by the amount of information about the dos and don'ts of plant care.

Motivation:

- Wants to provide proper care to see her plants grow.

Characteristics:

- Heavily relies on the website for tips on caring for her plants.

Goals:

- Become familiar with her plants' needs and provide optimal care for them.

Chosen APIs

Perenuals Plant API is a RESTful API that provides an extensive database of plant species, care guides, and images. It also offers valuable resources for niche categories such as tropical houseplants, and medicinal herbs.

Trefle API is a JSON REST API that provides detailed information about a specific plant.

Google Tasks API is a RESTful API that allows users to create and manage a list of tasks. In this project, users can use this feature to create one-time or recurring tasks for future plant care on specific dates, including watering and fertilization.

Todoist API is a REST API that provides users the ability to create tasks and to-do lists.

Planned Features

Perenuals Plant API:

Features:

- Users can view information about the plant, such as their characteristics.
- Users can get care guides for a specific plant, such as water, light, and fertilizing needs.
- Users can view the images of the plants as a reference.

User Stories:

- As a beginner to houseplants, I want to view information about plants so that I can learn about their characteristics.
- As a beginner to houseplants, I want to get care guides for my specific plant so that I know how much to water or fertilize, and how much light they need.
- As a user, I want to be able to view images of the plants during searches so that I can identify them more easily.

Trefle API:

Features:

- Users can choose to look for information about plants, such as height, colors, and plants in a specific country.
- Users can obtain trivial information about a specific plant, such as the species' family name, genus, and lifespan.
- Trefle API can be used to obtain information about planting guides for a specific plant.

User stories:

- As a beginner, I want to know which plants are available around my area, so I can make possible adjustments in case the plant that I want is not available.
- As a curious user or student, I want to learn about the specific details of a plant like its family name and genus.
- As a dedicated user, I need a plant guide from start to finish to care for my plant.

Google Tasks API:

Features:

- Users can create single or recurring plant care reminders.
- Users can enable automatic prompts to reschedule missed tasks.
- Users can arrange tasks based on different priority levels.

User Stories:

- As a beginner, I want to create single or recurring reminders for plant care tasks so that I don’t forget when to water or fertilize my plants.
- As a user who sometimes misses tasks, I want automatic prompts to reschedule missed plant care reminders to stay on track with my plant care routine.
- As an organized user, I want to arrange my plant care tasks by priority so that the most urgent ones are completed first.

Todoist API:

Features:

- Users can add tasks and specify in the task name when it needs to be done. For example, “Need to prune plants every third Saturday”, Todoist can auto-detect due dates and create reminders.
- Users can split large tasks into sub-tasks, for example, your large task could be “Plant shrubs in the garden” and subtasks could be “Buy soil”.
- Users can prioritize what tasks need to be done for the day, for example, a user can set “Buy plants” as a high priority, and then “Water plants” as the second highest priority.

User stories:

- As an organized user, I want to list all the plant care tasks I need to complete today so that they are easy to find and manage.
- As an easily overwhelmed user, I want my tasks to be broken down into smaller tasks so that I can complete them one at a time without feeling stressed.
- As a busy user, I want to be able to know which tasks I need to prioritize so I can tackle them within my schedule.

Chosen Front-End Technology Stack

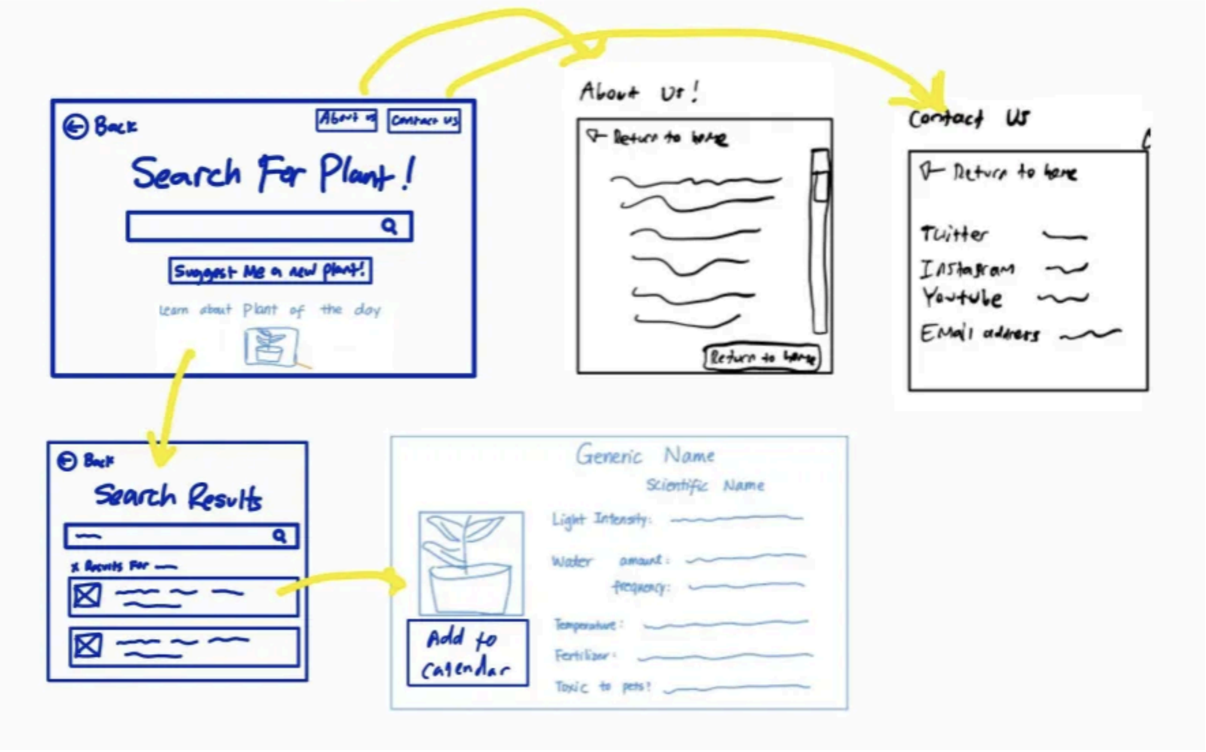
For this project, we will be using React for our web application framework. The reasons why we chose React are as follows:

- Simple to learn in a short time,
- Able to reuse code components for other features (code flexibility and scalability),
- Faster loading time for a better user experience,
- Automated unit tests and integration tests, allowing fast and efficient testing.

Tailwind CSS will also be used for the following reasons:

- Beginner-friendly as it offers documentation on examples and guides.
- can use standardized classes for colors and spacing. etc, which improves design consistency across the project
- can directly apply styles via utility classes in your HTML, speeding up development.

Low-Fidelity Prototype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