Internal Home Directory

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Goals

- Create a simple inventory management system that can be locally hosted and deployed for personal use.
- Create an intuitive and gamified way of tracking items to instill mindfulness.
- Add convenient and smart features such as
    - Adding items by barcode
    - Adding items by QR code
    - Implementing sorting algorithms to intuitively sort items
    - Deploying an easy-to-use and enjoyable interface

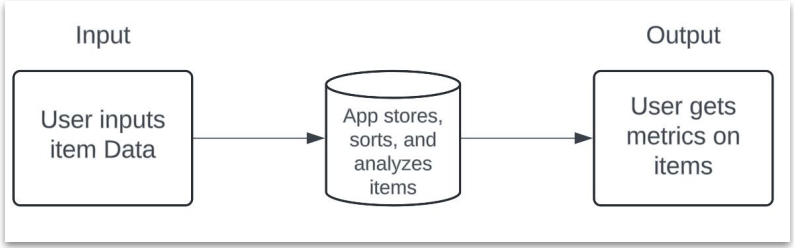
Intellectual Merits

- Gamifying the use of the application and improving quality of life
- Adding a more in-depth way to sort through items
- Adding the functionality and interface to effortlessly organize items
- Adding the convenience to add items through barcode and easily insert information automatically.

Broader Impacts

The desired outcome of this project is to create mindfulness around overconsumption, encouraging creativity when it comes to repurposing items. We hope the gamification of organization and usage of items will inspire users to remember what they own, thereby reducing financial and material waste in the future. This app is intended for users of all kinds, whether they be your average person, a business, or a friend group.

Design Specifications



High level Database Representation

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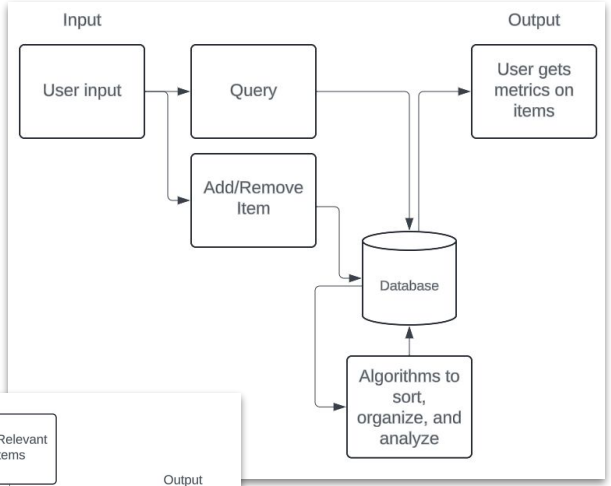

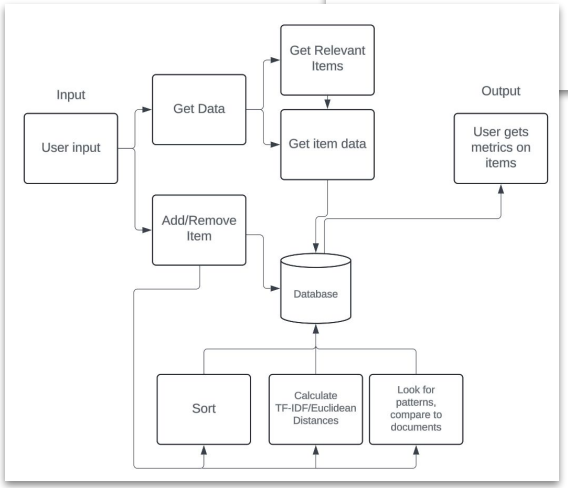

Medium/High level Database Representation

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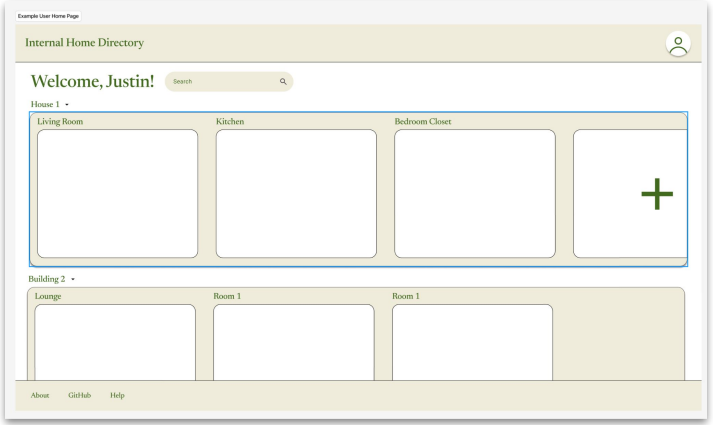
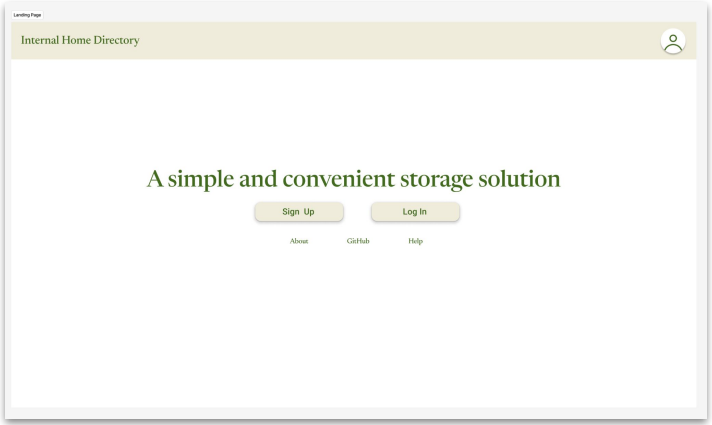
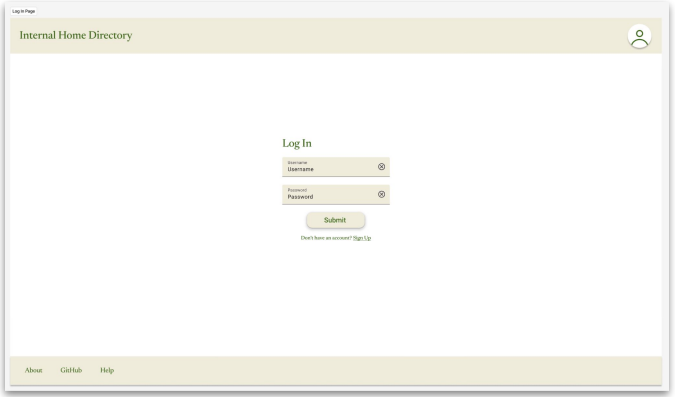


Home Page Figma/Wireframe



Landing Page Figma/Wireframe



Login Page
Figma/Wireframe

Technologies

- React Frontend
  - HTML
  - CSS
  - TypeScript
  - Axios to send API calls and receive data
- Python Backend
  - Flask to receive calls to database and parse database
- Rest API - Flask & Axios
- SQLite Database

Milestones / User Stories

- Creating the frontend
- Creating the backend
- Creating the database
- Adding scanning functionality to add items
- Adding a sorting algorithm

User Stories

- As a user, I want to save data that I input so that I don't have to worry about keeping track of items myself
- As a user, I want my data to be in one place so I don't have to keep track of different lists in different places
- As a user, I want the program to sort data that I input so that I don't have to organize data myself
- As a user I want the program to be able to gather information from a document that I input so that I don't have to manually input everything in the document myself

Results

We currently have:

- A basic frontend
- A basic backend that handles API calls
- A database using SQLite
- End-to-end functionality

To do:

- Freshen up the design of the framework
- Add more quality-of-life features to the user interface
- Add more features to the backend API
- Add searching/sorting algorithms to the API

Challenges

- We have never programmed in the React frontend framework before
- We have never developed an application end to end
- We have never programmed with a barcode scanner
- We have never programmed with visual detection or learning
- We have never implemented search/sorting algorithms in a practical application
- Decreasing friction so that users find themselves wanting to use the application