Household Menu Planner and Ingredient Tracker (HoMePIT) Requirements

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Introduction

- HoMePIT will assist with planning a household's menu and tracking its supply, usage, and replacement of ingredients and other foodstuffs.
- Its primary features are the Pantry, Recipe Book, Meal Planner, and Shopping List
- This presentation will serve to introduce the core components of this application.

Sign-in & Sign-out

- When first opening the website, a user will be presented with a prompt to sign into the website by connecting their Google account. (1.1)
- Only after signing in will the user be capable of viewing further pages. (1.1.2)
- After the initial sign-in, the user will also have the option to sign out. (1.1.2.1)
- This feature will be made possible using Supabase, which allows for user authentication through various social platforms such as Discord, Facebook, Spotify, and Google.

Navigation Bar

- There will be a navigation bar displayed with prompts for changing the currently viewed page. (2.1)
- Clicking a prompt will change the viewed page. (2.1.1)
    - There will be prompts for the Pantry, Recipe Book, Meal Planner, Shopping List, and Settings pages.
- The page currently in view will be visually indicated, along with any page that has updates/notifications. (2.1.2-3)
- This requirement will be fairly easy to implement using simple JavaScript, HTML, and CSS.

Pantry

- Page will consist of a list of ingredients created by the user. (3.1)
  - Page will initially be empty, with a button to add a new ingredient. (3.1.1-2)
- Adding an ingredient will prompt the user for name, quantity, threshold quantity, expiration date, serving size, calorie and macro content, price, location, user tags, and substitutions. (3.1.2.1.1-31)
- Each ingredient will have its name, quantity, and expiration date displayed in the Pantry. (3.1.3)
- There will further be options to remove and reorder ingredients in the list. (3.1.4, 3.1.6)
  - Ingredients may be sorted by a myriad of specifications such as alphabetically, exp. date, macro content, etc. (3.1.6.1.2.2)
  - A button will exist to reset the lists sorting to the default, alphabetical ascending ordering. (3.1.7.1)

Pantry cont.

- The Pantry may be opened via the Recipe Book to select ingredients for recipes. (3.2)
  - Ingredients may be added to a recipe with an “add” button. (3.2.2)
  - User will be taken back to the ingredients list after selecting a “close” button. (3.2.3.1)
- Likewise, it may be opened via the Pantry when selecting ingredient substitutes
- The Pantry and ingredient system will likely confer some challenge to implement, as we will be manipulating highly interconnected data to provide a comprehensive ingredient list, along with the needed nutritional information.
  - This data must also be accessible from the other pages of HoMePIT.

Recipe Book

- This page will consist of a list of recipes created by the user (4.1.)
    - Initially, this will be empty. There will be an option to add a new recipe or remove an existing one. (4.1.1-2, 4.1.4)
- When adding a recipe, users will be prompted for name, serving count, expected leftovers, cook time, calorie and macro content, leftover expiration time, user tags, and more. (4.1.2.1.1-19)
- Each recipe will display its name, cook time, calories per serving, macro content, leftover count, and time since creation. (4.1.3)
- The user will be able to add completely new ingredients to their Pantry when creating a recipe (4.1.2.1.19.2)
- The user may also specify recipes as ingredients to other recipes (4.1.2.1.19.3)

Recipe cont.

- Upon clicking the name of a recipe, it can be modified, also showing existing information (4.1.3.1.1)
- Just as with individual ingredients, the option will exist to change how recipes are sorted. (4.1.6.1)
    - Unique features will be cook time, time since last cooking, leftover freshness, number of leftovers, and time until expiration. (4.1.6.1.2.2)
- There will be input boxes to search for recipes individually, by ingredient, or by tag (4.1.8-9)
- The Recipe Book may be opened via the Meal Planner page to include recipes in a meal plan, as well as specify new recipes. (4.2.2.2)

Meal Planner

- This page will contain a calendar containing all days of the current month. (5.1.0-1)
    - Each day will be clickable, revealing a list divided into different meal sections with labels for meal times (5.1.2.1.1.2.1-2) and cook times (5.1.2.1.1.2.8-9)
- There will be an option to add and remove recipes. (5.1.2.1.1.2.6-7)
- Within each meal section, each recipe will have labels for the recipe name and a radio button with 2 options, “cook from scratch” or “use leftovers”. (5.1.2.1.1.2.10.1-8)
- There will be a label for daily calories, macros, and costs. (5.1.2.1.2-10)

Meal Planner cont.

- Each month of the year will have a button with an internal label displaying its name. (5.1.4)
  - Upon clicking, a summary of monthly nutritional and financial information will appear in a modal (5.1.4.1.1)
  - If a value cannot be calculated, no information will be displayed for a given parameter. (5.1.4.1.2)
- The option will exist to calculate information over a given date range. (5.1.5)
  - There will be a label for both starting and ending date, as well as input boxes connected to each. (5.1.5.1.1-4)
  - Date format will be DD-MM-YYYY. (5.1.5.1.2.1, 5.1.5.1.4.1)
- The calendar system will be an interesting feature to work with. Being a visual expression of the user's dietary goals, making an intuitive design offers room for creativity.

Shopping List

- Upon opening of the page, the user will be prompted to define a shopping trip frequency and preferred shopping day, had they not already done so. (6.1)
- This page will contain a list of shopping lists, broken into lists according to the span of meals any given shopping list should cover. (6.2.1.1)
    - Each shopping list should minimize the number of stores to be visited. (6.2.1.1.3)
- Each shopping list will contain a label for the date range it satisfies and an input box to manually set the dates. (6.2.1.2.1)
- The user will be able to add ingredients manually, as well as “close out” a shopping list to confirm that its contents have been purchased. (6.2.1.2.3)

Shopping List cont.

- While this page will generate shopping lists automatically for the user, this does not prevent them from modifying (removing, substituting, or adding) ingredients themselves.
    - Changes made in this regard will only affect the shopping list and not be reflected in the meals the list is based on.
- To define a new shopping list, the user must select the first and last days a shopping list should satisfy, i.e. the span of time a set of ingredients should last for the creation of meals. (6.2.2.0-2)
- Automatic shopping list generation can be considered a “risky” feature, particularly when applying custom date ranges. This will have to account for other shipping lists to not cause conflict, overbuying, etc.

Settings

- This page will consist of a toggle button for automatic shopping list creation, a label for grocery trip frequency, a label for preferred grocery shopping day, and a button to sign out.
    - An input box will be linked to the grocery trip frequency label, which will accept numbers as input. (7.1.3.0-2)
    - A drop down menu will be linked to the grocery trip frequency input box, which will have a placeholder value of “Days” and will contain “Days” and “Weeks”. (7.1.4)
- Upon clicking the “sign out” button, the user will be signed out and presented the sign-in page. (7.1.7.1)

Misc & Modal

- When an ingredient or leftover has an approaching expiration date, a modal will appear to inform the user of impending expiration.
  - The user will be informed when 7, 3, and 1 days from expiration. (8.1.1-3)
  - The modal will name the ingredient or leftover in question. (8.1.4)
- The color scheme should be neutral and light.
- All modals will have a button to close the modal. (9.1)
- All modals taking user input will have a button to apply the user input and close the modal.