CSC 545: Term Project

Problem Statement

Ivan Olivas Trevor Cunagin Ethen Holzapfel Michael Galliers

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This document details the specifics of how the term project program will function and the problems it will solve.

Problem Statement

We need an application that will allow for us to easily manage our weekly meal plans for each day of the week. This application should allow for us to keep a collection of recipes, track what ingredients we currently have, create meal plans for each meal of the day, create a shopping list based on our supply of ingredients, and search for recipes.

Requirements

The following are key functionalities that the program will implement:

- Allow users to create, list, update, and delete food items.
- Allow users to create, list, update, and delete recipes.
- Allow users to create, list, update, and delete daily meal plans.
- Allow users to create, list, update, and delete weekly meal plans.
- Allow users to generate a shopping list based on a particular weekly meal plan and what food items the user already has.
- Allow users to search for recipes by food ingredients or recipe category.

Assumptions

- The program will support managing multiple weekly meal plans.
- Rather than just tracking what items are specifically "in the fridge", the program will track whatever items the user "has" in general (including items that could be found in the pantry, etc.).
- The amount of a food item that a user has will be tracked in a generic "units" quantity of type integer.

- If a recipe is listed as needing a particular ingredient, it is assumed that making the recipe will consume 1 unit of that ingredient.
- Each relation attribute will be explicitly constrained (unless otherwise obvious) with either `null` or `not null` for increased clarity.
- To simplify the program design, each relation (excluding M2M join tables) will have an `id` integer primary key that is automatically generated when a row is created.