IT775: Assignment 01 - Recipe Box

In a relational database model, I believe the task at hand could be solved with three tables. One table is responsible for housing all recipes, which are all related to the secondary table which holds all ingredients currently on hand. Finally, the tertiary table will be a staging area of sorts for joining the recipes together, to provide the user with the end goal of the meal.

First Table - Recipes
- recID - number - A primary key used for distinguishing specific recipes apart
- recName - string - An identifier to give the user a name or title that they can refer to that recipe as
- recIngr - array of tuples - A list to provide both the user and the database, with linkable attributes that can be used as a query to find entities in the secondary table that reflect the same name. The tuple will contain an ingrName, and a measurement of how much is required for the dish
- recPop - number - A rating (0-5) for the user to gauge how good/enjoyable the recipe is
- recDiet - array - A list of dietary alignments/restrictions that will give the user an identifiable tag to sort by if needed. This attributes implementation can be granular to either work as an intelligently provided list(Done by querying each ingredient and looking at their own dietary classification, then cross-referencing them to point out collision), or by whatever is inputting/scraping the recipes(Which is commonly provided as a tag for most recipes online)
- recClas - string/array - The classification field as mentioned by the specification, can be breakfast, lunch, dinner, dessert, snack, party, misc.
- recPort - number - A percentage value (0.00-1.00) that will give the user an identifier on both how many people the dish can serve, and what the serving size is for the recipe
- recMeat - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for protein is contained in the dish
- recVeg - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for vegetables is contained in the dish
- recFrui - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for fruit is contained in the dish
- recGrai - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for grain is contained in the dish
- recDair - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for dairy is contained in the dish
- recDesc - string - A description of the steps to put together the dish

Second Table - Ingredients
- ingrID - number - A primary key used for distinguishing specific food items apart
- ingrName - string - An identifier to give the user a name or title that they can refer to that food item as
- ingrDiet - array - A list of dietary alignments/restrictions that will give the user an identifiable tag to sort by if needed.

- ingrMeat - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for protein is contained in the food item. Used in calculating recipe totals
- ingrVeg - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for vegetables is contained in the food item. Used in calculating recipe totals
- ingrFrui - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for fruit is contained in the food item. Used in calculating recipe totals
- ingrGrai - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for grain is contained in the food item. Used in calculating recipe totals
- ingrDair - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for dairy is contained in the food item. Used in calculating recipe totals

Third Table - Meals

- mealID - number - A primary key used for distinguishing specific meal items apart
- mealName - string - An identifier to give the user a name or title that they can refer to that meal item as
- mealRec - array - An array of recIDs that coincide with that meal
- mealDiet - array - A list of dietary alignments/restrictions that will give the user an identifiable tag to sort by if needed.
- mealMeat - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for protein is contained in the meal item. Used in calculating recipe totals
- mealVeg - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for vegetables is contained in the meal item. Used in calculating recipe totals
- mealFrui - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for fruit is contained in the meal item. Used in calculating recipe totals
- mealGrai - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for grain is contained in the meal item. Used in calculating recipe totals
- mealDair - number - A percentage value (0.00-1.00) that will give the user an identifier on how much of the DV for dairy is contained in the meal item. Used in calculating recipe totals