Groceries:

Heuristics for planning

Have we had it recently?

Have we had similar dishes recently? (especially meat content and cuisine)

Variety of cuisines

Who’s cooking

Family pack coordination

How many servings

Dietary restrictions of family members if applicable

How much we like it

How quick is it (usually like 1 quick and 2 longer)

Can you bring it to school

Have enough that Day likes

What ingredients do we have extra lying around?

Ingredients in season

How perishable are the ingredients

Someone’s out of town

Algorithm –

Input from user:

Number of dishes required or how many days of food needed

Dietary restrictions – either given directly or given a code e.g. “Julie visiting”

Ingredients we need to get rid of

Who needs to cook this week

Choose a dish at random based on how much we like it, what we’ve had recently, and what we have in the house.

Choose complementary dishes based on other factors

Suggest a combo

Allow user to replace a dish with another selection or start over (need to eliminate dishes that have already been vetoed), or adjust size

After selections have been made, print a list.

Need a recipe class holding:

Name

Ingredients and amounts

Heuristics

Vetoed bool

Need a master table of recipes and a module to read them into a list of recipe objects

In the table, ingredients can be stored as a name of a text file with the actual ingredients and instructions for cooking.

Need a module to run the algorithm

Module to give information about recipes

Need ingredient class with some information:

Comes in family pack?

Staple around the house?

Seasons

Perishability

Where in grocery store

There should be defaults if we don’t bother to program it.

Need module to sort ingredients in grocery store order

Modules:

Groceries.py

Global Variables:

GlobalState

//Currently selected stuff for this week

CurrentRecipes

CurrentRestrictions

Functions:

LoadState // Load the global state, which includes the master ingredient list, master recipe list, total restrictions, and history of recipes used. Use pickle to serialize

SaveState // Serialize and save the global state

RecordHistory // Record new historical information

SuggestRecipes // Suggest a set of candidate Recipes based on global state

ChooseFirstRecipe // Choose a first recipe based on global state

GenerateList // Generate a grocery list based on the chosen recipes

ModifyRecipes // Make manual modifications to current recipes

SetRestrictions // Set Restrictions on diet, number of days to plan for, etc.

ModifyStaticState // Modify static state by defining new ingredients, new recipes, etc.

Main // Do prompts and menus

Selector.py

Functions:

PickFirstRecipe // pick first recipe

PickMatchingRecipes // pick recipes to match first

WeightFirstRecipe // Assign a weight to a recipe

WeightAccompanyingRecipe //Assign a weight to a recipe with accompanying previous recipe(s)

SelectFromWeights // Select a recipe based on calculated weights

Ingredient.py

Classes:

Ingredient

Functions:

DefineNewIngredient //Add new ingredient to total state

Recipe.py

Classes:

Recipe

Members:

Ingredient [] ingredients

Functions:

Functions:

DefineNewRecipe //Add new recipe to total state

GroceryList.py

Functions:

MakeGroceryList // Give a set of recipes, and get a grocery list

SortIngredients //Sort a list of ingredients in grocery store order

DeleteCommonIngredients // Delete ingredients that you probably already have, selectively

History.py

Class RecordedEvent

//which recipes you picked on a given date