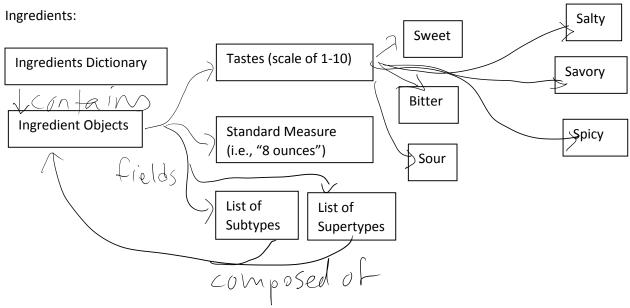Natural Language Processing
Final Project: Recipe Transformer
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<u>How We Represent the Internals of Our System</u>

Ingredients:

| Ingredients Dictionary |

contains

| Ingredient Objects |

fields

| Tastes (scale of 1-10) |

| Sweet |

| Salty |

| Savory |

| Bitter |

| Spicy |

| Sour |

| Standard Measure (i.e., "8 ounces") |

| List of Subtypes | | List of Supertypes |

composed of

We have lists of cooking methods and of cooking tools.

We have a function that converts cooking methods to their implicit tools (i.e., "bake" -> "oven"; "stir" -> "spoon", etc.).

We have lists of herbs and spices that comprise flavor palates (i.e., "European", "middle-eastern", etc.)

We have one main function that does almost all the work for us: SwapOut. SwapOut takes a list of ingredients to swap (can have only one member), a recipe, and a group of ingredients to pull from (defaults to all ingredients). For each ingredient to swap, SwapOut finds the best match from the ingredients to pull from and replaces the original with the new ingredient in both the ingredient list and the recipe itself.

- To make a recipe vegetarian, SwapOut replaces all meat in the recipe with something from the vegetarian protein category (and vice versa to make a vegetarian dish have meat).
- To change the flavor palate, SwapOut replaces every ingredient in the recipe that is part of the HerbsAndSpices group with something from the target flavor palate (this allows self-replacement, as, for example, cinnamon is a spice in many cultures).
- To swap out a particular ingredient, SwapOut replaces that ingredient with the best match found (can specify a group, but defaults to all ingredients).

Ingredients

plants → herbs
- parsley
  - curley parsley
  - flat parsley
- sage
veg. → etc

dairy
- milk
- yogurt
- cheese
  - cheddar
  - blue

[more]

Protein → veg. protein
- tofu
- seitan

Protein → seafood
- molluscs
- crustaceans
- fish

Protein → meat
- beef
  - ribs
  - stew
  - steak
- pork
  - ribs
  - chops
- lamb
- etc