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11/06/2012
Project Phase 3

Recipe	
RecipeID	Directions

madeUpOf/areIn	
RecipeID (refers to RecipeID in Recipe)	IngredientID (refers to IngredientID in Ingredient)

Ingredient			
IngredientID	Name	Quantity	Weight

has/areIn	
IngredientID (refers to IngredientID in Ingredient)	listID (refers to listID in GroceryList)

GroceryList	
listID	Date

Food					
FoodID	Name	MealType	Ethnicity	Calories	recipeID (refers to RecipeID in Recipe)

Drink					
DrinkID	Name	Alcoholic?	Ethnicity	Calories	recipeID (refers to RecipeID in Recipe)

Functional Dependencies:

RecipeID -> Directions
IngredientID -> Name, Quantity
Quantity -> Weight
listID -> Date
FoodID -> Name, MealType, Ethnicity, Calories, recipeID
DrinkID -> Name, Alcoholic?, Ethnicity, Calories, recipeID

Since all the FDs (except one) have the form that they are dependent on the full primary key, this design is in 2NF.

So after converting Ingredient into 3NF, it becomes:

Ingredient		
IngredientID	Name	Quantity

Mass	
Quantity	Weight

Integrity constraints in the following tables:

madeUpOf/are:
- recipeID
- ingredientID

has/areIn:
- ingredientID
- listID

Food:
- recipeID

Drink:
- recipeID