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Data Modeling Lab

Brainstorming:

1. Sign In
    a. Email
    b. password
2. Recipes
    a. Ingredients
    b. Instructions
    c. Public/private
    d. Owner
3. Grocery List
    a. Ingredients (reference recipes)
4. Occasions
    a. Assign recipes to occasions

Table Ideas:

1. User Info
    a. One row per user
        i. Email
        ii. Password
2. Recipes
    a. One row per recipe
        i. Ingredients
        ii. Instructions
        iii. Public/private
        iv. Owner (user)
3. Grocery List
    a. One row per grocery list
        i. Ingredients (multiple recipes)
4. Occasions
    a. One row per occasion
        i. Recipes
5. Ingredients
    a. Referenced by both grocery list and recipes
    b. May require additional table to relate recipes and ingredients

Relationships:

1. One-to-one
    a. Grocery List
        i. Grocery list will only reference the recipes' ingredients
2. One-to-many
    a. User info

i. Grocery list, Occasions, and recipes reference the user info, which references nothing

b. Occasions

i. Occasions will reference the user and recipes

3. Many-to-many

a. Recipes

i. Reference user info, referenced by grocery list and occasions

Making Tables:

```
CREATE TABLE users (
  user_id SERIAL PRIMARY KEY NOT NULL,
  name VARCHAR(255) NOT NULL,
  password VARCHAR NOT NULL
);

CREATE TABLE recipe (
  recipe_id SERIAL PRIMARY KEY NOT NULL,
  recipe_name VARCHAR(255) NOT NULL,
  user_id INT NOT NULL REFERENCES users(user_id),
  public BOOL NOT NULL,
  instruction VARCHAR NOT NULL,
  ingredients INT REFERENCES recipeIngredients(relationship_id)
);

CREATE TABLE groceryList (
  groceryList_id SERIAL PRIMARY KEY NOT NULL,
  groceryList_name VARCHAR(255) NOT NULL,
  user_id INT NOT NULL REFERENCES users(user_id),
        recipes INT NOT NULL REFERENCES addToGrocery(addRecipe_id)
);
```

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```
CREATE TABLE ocassions (
  occasion_id SERIAL PRIMARY KEY NOT NULL,
  occasion_name VARCHAR(255) NOT NULL,
  user_id INT NOT NULL REFERENCES users(user_id),
        occasion_recipes INT NOT NULL REFERENCES occasionRecipes(occasionRecipe_id)
);

CREATE TABLE ingredients(
  ingredient_id SERIAL PRIMARY KEY NOT NULL,
  ingredient_name VARCHAR(255) NOT NULL);

CREATE TABLE viewRecipes(
  viewing_id SERIAL PRIMARY KEY NOT NULL,
  viewer_id INT NOT NULL REFERENCES users(user_id),
  otherUser_id INT NOT NULL REFERENCES users(user_id)
  recipe_id INT NOT NULL REFERENCES recipe(recipe_id)
  public BOOL NOT NULL REFERENCES recipe(public)
);

CREATE TABLE recipeIngredients(
  relationship_id SERIAL PRIMARY KEY NOT NULL,
  ingredient_id INT NOT NULL REFERENCES ingredients(ingredient_id),
   recipe_id INT NOT NULL REFERENCES recipe(recipe_id)
  quantity INT NOT NULL
);

CREATE TABLE addToGrocery(
  addRecipe_id SERIAL PRIMARY KEY NOT NULL,
  groceryList_id INT NOT NULL REFERENCES groceryList(groceryList_id),
```

```
  recipe_id INT NOT NULL REFERENCES recipe(recipe_id),
  recipeIngredients_id INT NOT NULL REFERENCES recipe(relationship_id)
);

CREATE TABLE ocassionRecipes(
  occasionRecipe_id SERIAL PRIMARY KEY NOT NULL,
  occasion_id INT NOT NULL REFERENCES occasion(occasion_id),
            recipe_id INT NOT NULL REFERENCES recipe(recipe_id)
);
```