**Features**

1. users can sign into the app with their email and password
2. users can create recipes with ingredients and instructions
3. recipes can be marked as public or private
4. users can view other people’s recipes
5. ingredients from recipes can be added to user’s grocery lists
6. users can create their own occasions and assign recipes to occasions

**Step 1 – Brainstorming**

* User details (name, username, email address, password)
* Recipes (instructions, public/private, ingredients)
* Ingredients (needs to communicate with grocery lists, recipes)
* Grocery Lists (needs to communicate with users, ingredients)
* Other User Recipes (A user can view other users’ recipes and other users’ recipes can be viewed by many users)
* Occasions (needs to be able to communicate with users, recipes)

**Step 2 – Table Ideas**

1. Users – this table will hold basic user information including ID, name, username, and password.
2. Recipes – this table will hold all of the recipes, each row will be an individual recipe with instructions, ingredients, and privacy status, name. Reference to user\_id.
3. Ingredients – this table will hold all recipe ingredients, each row will be an individual ingredient with an id and name.
4. Grocery Lists – this table will hold the grocery lists, each row will be an individual list with its own id, name. Reference user\_id, recipe\_id, and recipe\_ingredients.
5. Occasions – this table will hold the occasions and each row will be an individual occasion with its own id, name. Reference user\_id and recipe\_id.

**Step 3 – Relationships**

**One-to-One**

None.

**One-to-Many**

A user can have many recipes and a recipe can have one user.

A user can have many grocery lists and a grocery list can have one user.

A user can have many occasions and an occasion can have one user.

**Many-to-Many**

A grocery list can have many ingredients and an ingredient can be on many grocery lists.

An ingredient can have many recipes and a recipe can have many ingredients.

A recipe can have many occasions and an occasion can have many recipes.