Data Modeling

Scenario: **Summary**
We want to create a recipe creating/sharing and grocery list app. You'll be planning out what tables we'll need, what information they'll store, and how the data will relate to each other.

Features
- users can sign into the app with their email and password
- users can create recipes with ingredients and instructions
- recipes can be marked as public or private
- users can view other people's recipes
- ingredients from recipes can be added to user's grocery lists
- users can create their own occasions and assign recipes to occasions

Conceptual Planning - Word/Google/Pages Doc
Step 1 - Brainstorming:

Signing In (User Table)	User Page (User Table)	Recipe Creating (Post)	Recipe Sharing (Share)
*User ID *User first name *User last name *User pronouns *User email *User password *User birthday	*User ID *User Bio *User Picture *User "Favs" foods [users can like, **view**, comment, Recipe sharing to their page→]	*Recipe ID *Recipe Author (User/Author ID) *Recipe name *Recipe picture *Recipe ingredients → Grocery List (recipe_id) *Recipe tools *Recipe instructions *Recipe tips *date recipe was posted *Recipe public T/F[0/1 int] *Recipe Occasions → [group people who like same type of food]	*Recipe ID *Review (comment) on recipe *Recipe rating (1 - 5 stars) *Recipeshare type: Location (Where was this recipe shared), was it shared as a link? In a comment?
Group Recipe Sharing	Grocery List	Occasion	Ingredients
*User ID *Group ID *Post ID *User/Group Comments *User/Group Posts *User/Group Likes *User/Group Shares	*Grocery ID *Recipe ingredients (recipe_id)	*Occasion ID *Occasion Type *Dinner date, *Family bbq *Meal Time *Breakfast, *Brunch, *Lunch, *Dinner *Recipe ideas(Recipe ID)	*ingredinet id *Ingredient name *ingredient type (meant, fish, veggie, fruit, dairy) *Ingredient amount *ingredient quantity (lbs/num)
Tools			
*tool_id *tool_name			

Step 2 - **Table Ideas:**

User Table:
Columns: (user_id, user_first_name, user_last_name, user_pronouns, user_email, user_password, user_birthday, user_profile_pic, user_bio) (**one-to-one**)

Ingredient Table:
Columns: (ingredient_id, ingredient_name, ingredient_type)

Recipes Table:
Columns: (recipe_id, recipe_author[user_id], recipe_name, recipe_picture, recipe_ingredients, recipe_tools, recipe_instructions, recipe_post_date, recipe_occasion, is_recipe_post_public[True/False]) (**one-to-many**)

Share Recipe Table:
Columns: (share_id, recipe[recipe_id], recipe_rating, recipe_review, recipe_share_type) (**many-to-many**)

Grocery Table:
Columns: (grocery_id, recipe_ingredients[recipe_id]) (**one-to-many**)

Occasion Table:
Columns (occasion_id, occasion_type, meal_time, recipe_ideas[recipe_id]) (**many-to-many**)

Step 3 - **Relationships**:

One-to-one

- User Table: User → User info

  I chose this relationship because only one user can have one data point (first name, last name, email, password, birthday, etc) associated with their profile. While there can be an option to update/change certain data points (update email, change password), there can only be one data point associated with the user at one time.

One-to-many

- Recipes Table: User→ create → Recipes

  I chose this relationship because only one user can be associated with authoring multiple recipes, but only one recipe can be referenced back to the user. The recipe creation gets created and executed, essentially, as a “post.”

- Grocery Table: Recipe Ingredients (from recipe) → share → Grocery List

  I chose this relationship because ingredients from a recipe can be shared and associated with a grocery id.

Many-to-many

- Share Recipe Table: Users →share ← Recipes

I chose this relationship because many users can share a post (and/or multiple posts) and a post can be shared by many users (and/or a user).

- Occasion Table: Recipes → ← Occasions

I chose this relationship because one or many recipes can be for one or many occasions. A recipe for bacon and eggs can be for breakfast and/or brunch. A dinner date occasion can have a Steak and potatoes recipe and/or a shrimp scampi recipe (etc).

Columns:

```
CREATE TABLE users (
 user_id SERIAL PRIMARY KEY,
 user_first_name VARCHAR(50),
 user_last_name VARCHAR(50),
 user_pronouns VARCHAR(50),
 user_email VARCHAR(50),
 user_password VARCHAR(500),
 user_birthday INTEGER,
 user_bio VARCHAR(1000)
);

CREATE TABLE ingredients(
 ingredient_id SERIAL PRIMARY KEY,
 ingredient_name VARCHAR(50)
);

CREATE TABLE tools(
 tool_id SERIAL PRIMARY KEY,
 tool_name VARCHAR(50)
);

CREATE TABLE occasion(
 occasion_id SERIAL PRIMARY KEY,
 meal_time VARCHAR(50),
 recipe_ideas INT NOT NULL REFERENCES recipes(recipe_id)
);

CREATE TABLE recipes(
 recipe_id SERIAL PRIMARY KEY,
 user_id INT NOT NULL REFERENCES users(user_id),
 recipe_name VARCHAR(100),
```

```
 has_recipe_picture BOOLEAN,
 recipe_ingredients INT NOT NULL REFERENCES ingredients(ingredient_id),
 recipe_tools INT NOT NULL REFERENCES tools(tool_id),
 recipe_instructions VARCHAR(5000),
 recipe_post_date INT,
 recipe_occasion INT NOT NULL REFERENCES occasion(occasion_id),
 is_recipe_post_public BOOLEAN
);

CREATE TABLE share_recipe(
 share_id SERIAL PRIMARY KEY,
 recipe INT NOT NULL REFERENCES recipes(recipe_id),
 recipe_review VARCHAR(150)
);

CREATE TABLE grocery(
 grocery_id SERIAL PRIMARY KEY,
 recipe INT NOT NULL REFERENCES recipes(recipe_id),
 grocery_ingredients INT NOT NULL REFERENCES ingredients(ingredient_id)
);
```