## **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 - (friend list or just set recipe public/private?)
* ingredients from recipes can be added to **user’s grocery lists** -
* users can create their own occasions and assign recipes to occasions

## 

## **Part 1: Conceptual Planning - Word/Google/Pages Doc**

### **Features**

### **Brainstorming things to keep track:**

* User\_id
* User\_name
* User\_email
* User\_password
* User\_profile (text)
* User\_profile\_photo (imageURL)
* Recipe\_id
* Recipe\_title (heading?)
* Recipe\_visibility (public/private)
* Recipe\_instructions (text)
* Recipe\_image\_URL
* Recipe\_ingredients (ingredient\_ID?)
* Ingredient\_amount
* Grocery\_list
* List\_id
* Ingredients
* Ingredient\_amount (quantity?)
* User\_friend\_list
* Occasion\_ID
* Occasion\_description
* Recipe\_ID for occasion

### **Table Ideas:**

* **User Table: This table will hold the key user info for identification**
  + User\_id
  + Username
  + User\_email
  + User\_password
  + User\_firstname
  + User\_lastname
* **Recipe Table: This table holds unique info for each recipe**
  + Recipe\_id
  + Recipe\_title
  + Recipe\_privacy (public/private)
  + Recipe\_instructions (text)
  + Recipe\_image\_URL
  + Recipe\_comments
  + Ingredients\_ID
  + Ingredient\_amount (per recipe)
  + User\_id
* **Ingredient Table: This table holds unique info on each ingredient**
  + Ingredients\_ID
  + Ingredient\_name
  + Ingredient\_description
* **Groceries List Table: This is a middle table that contains the user info and ingredients because the user creates the groceries list based on their recipes**
  + Groceries\_list\_ID
  + User\_id
  + Ingredients\_ID
  + Ingredient\_count (this is different than the ingredient\_amount which is portion per each recipe)
* **Occasions Table: This stores info on each unique occasion**
  + Occasion\_ID
  + User\_ID
  + Occasion\_name
  + Occasion\_date
  + Occasion\_description
* **Recipe\_ingredient Table: This is an association table that link the recipe to the ingredient**
  + Recipe\_ingredient\_id
  + recipe\_id
  + ingredient\_id
* **Recipes\_Occasions Table: This is an association table that link the recipe\_id to occasion\_id**
  + Recipe\_Occasion\_ID (Serial Primary Key)
  + Recipe\_ID (tie to Recipe Table) (foreign key)
  + Occasion\_Id (tie to Occasion Table) (foreign key)

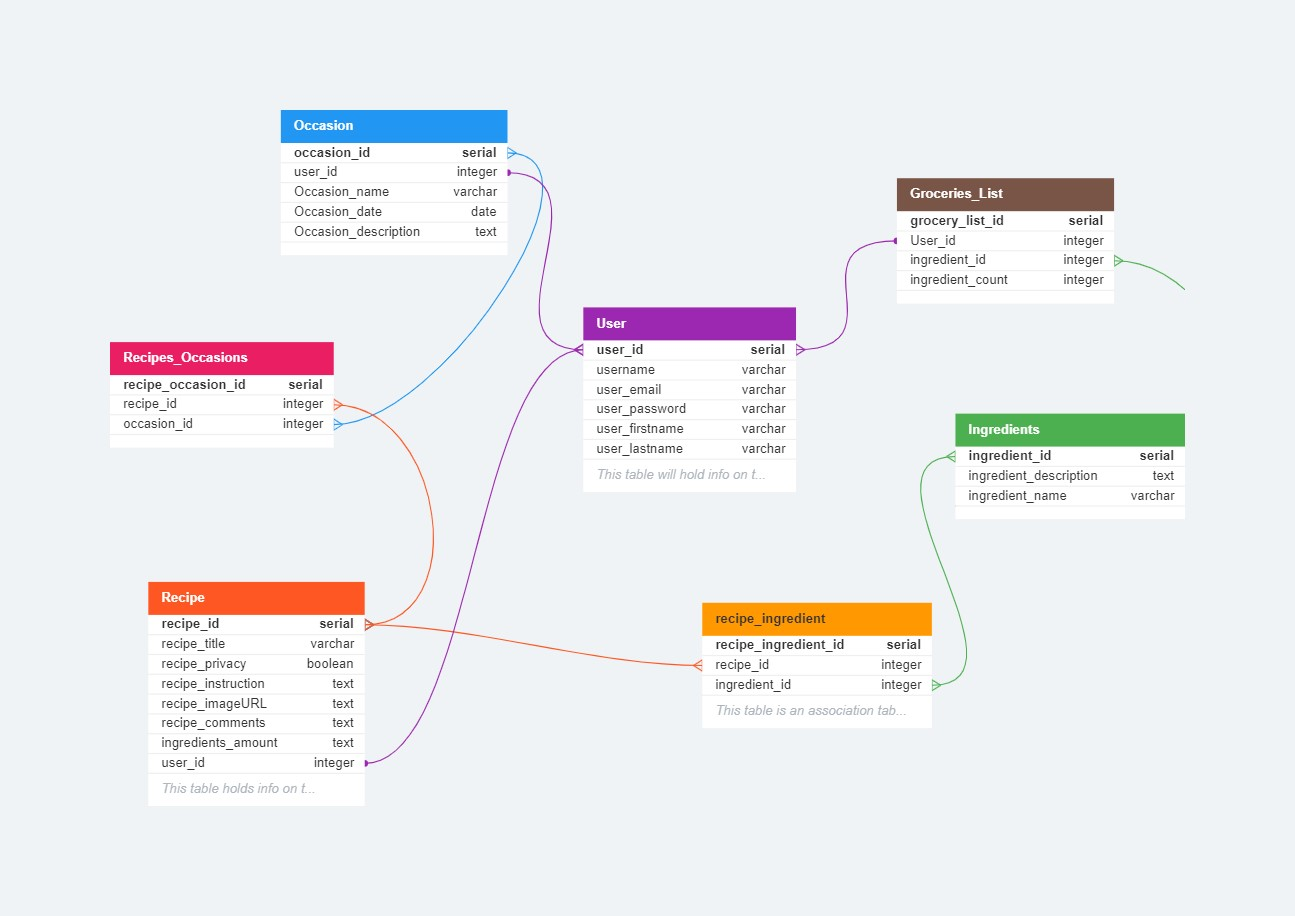
### 

### **Relationships**

* One-to-One
  + **None**
* One-to-Many
  + **User Table to Recipe Table:** one user can have multiple recipes, but a recipe can only belong to one user and multiple recipes can also belong to one user.
  + **User Table to Occasions Table:**one user can have multiple occasions because the user has to create the occasion
  + **User Table to Groceries Table:**  One user can create/edit multiple groceries list, but each grocery list only has one “owner user”.
* Many-to-Many
  + **Ingredient Table to Groceries Table:** one ingredient can belong to multiple groceries list, and one groceries list can contain multiple ingredients.
  + **User Table to Ingredients Table**: One user can consider many ingredients for a recipe or even a groceries list, and one ingredient can be considered by many users for a recipe or groceries list
  + **Recipes Table to Groceries Table:** one recipe can belong to many groceries list, and one groceries list can contain ingredients to make many recipes.
  + **Recipe Table to Ingredient Table:** the ingredient table contains the exact ingredient for the recipe.

## **Part 2: Table Planning - DB Designer & Word/Google/Pages Doc**

**Data Model Design using DB-DESIGNER.NET**



### **Columns**

* **User Signin Table: This table will hold info on the user**

User {

user\_id serial pk increments unique unique serial primary key for unique user\_id

username varchar(32) unique characters type with max 32 chars for unique username

user\_email varchar(32) unique characters type with max 32 chars for unique email

user\_password varchar(32) characters type with max 32 chars

user\_firstname varchar(32) characters type with max 32 chars

user\_lastname varchar(32) characters type with max 32 chars

}

* **Recipe Table: This table holds info on the recipe, instruction, ingredients, photos,**

Recipe {

recipe\_id serial pk increments unique unique serial primary key for unique recipe\_id

recipe\_title varchar(100) chars type with max 100 chars

recipe\_privacy boolean boolean type (True/False) for Public/Private, with False as default case for Public

recipe\_instruction text chars type with max 500 chars for user to add instructions

recipe\_imageURL text null text type for user to add image URLs with as many chars as needed

recipe\_comments text null text type for user to comments with as many chars as needed

ingredients\_amount text text type for the amount/portion of ingredient for each recipe, this is text type because it is part of the instruction

user\_id integer unique >\* User.user\_id this is the creator of recipe, with id will always be integers or numbers in this example.

}

* **Ingredient Table: This table holds info on each ingredient type, the amount, user\_id**

Ingredients {

ingredient\_id serial pk increments unique unique serial primary key for unique ingredient\_id

ingredient\_description text text type for user to add description to each ingredient

ingredient\_name varchar(100) chars type for each ingredient name

}

* **Groceries Table: Only the user has access to this groceries list**

Groceries\_List {

grocery\_list\_id serial pk increments unique serial primary key for unique grocery\_list\_id

User\_id integer unique >\* User.user\_id unique id for the creator of each grocery list, id should be numbers or integers

ingredient\_id integer \*>\* Ingredients.ingredient\_id unique id for each ingredient, id should be numbers of integers

ingredient\_count integer \*>\* Ingredients.ingredient\_amount integer type for each ingredient amount, portion

}

* **Occasions Table: This stores info on the occasion for the user to make a recipe, user can create their own occasion and assign the recipe**

Occasion {

occasion\_id serial pk increments unique unique serial primary key for unique occasion\_id

user\_id integer >\* User.user\_id unique id for the creator of each grocery list, id should be numbers or integers

Occasion\_name varchar(100) chars type with max 100 chars for each occasion name

Occasion\_date date unique unique date type for each occasion date

Occasion\_description text null text type for user to add description of occasion

}

* **Recipes\_Occasion Bridge Table**

Recipes\_Occasions {

recipe\_occasion\_id serial pk increments unique unique serial primary key for unique occasion\_id

recipe\_id integer unique \*>\* Recipe.recipe\_id integer type for the recipe\_id (tie back to recipe table)

occasion\_id integer unique \*>\* Occasion.occasion\_id integer type for the occasion\_id (tie back to occasion table)

}

* **Recipe\_Ingredient Bridge Table**

recipe\_ingredient {

recipe\_ingredient\_id serial pk increments unique serial primary key for unique recipe\_ingredient\_id

recipe\_id integer \*>\* Recipe.recipe\_id integer type for the recipe\_id (tie back to recipe table)

ingredient\_id integer \*>\* Ingredients.ingredient\_id integer type for ingredient\_id (tie back to ingredient table)

}

## **Part 3: Create Tables in SQL - Postgres Sandbox & Word/Google/Pages Doc**

**SQL code examples using DB-FIDDLE.COM:**

**SCHEMA SQL:**

-- Ingredients table -

CREATE TABLE Ingredients (

ingredient\_id SERIAL PRIMARY KEY,

ingredient\_name VARCHAR,

ingredient\_description TEXT

);

-- User table-

CREATE TABLE Users (

user\_id SERIAL PRIMARY KEY,

username VARCHAR(32) UNIQUE,

user\_email VARCHAR(32) UNIQUE,

user\_password VARCHAR(32),

user\_firstname VARCHAR(32),

user\_lastname VARCHAR(32)

);

-- Occasion table -

CREATE TABLE Occasion (

occasion\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

Occasion\_name VARCHAR(100),

Occasion\_date DATE UNIQUE,

Occasion\_description TEXT

);

-- Recipe table-

CREATE TABLE Recipe (

recipe\_id SERIAL PRIMARY KEY,

recipe\_title VARCHAR(100),

recipe\_privacy BOOLEAN,

recipe\_instruction TEXT,

recipe\_imageURL TEXT NULL,

recipe\_comments TEXT NULL,

ingredients\_amount TEXT,

user\_id INTEGER REFERENCES Users(user\_id)

);

-- Groceries\_List table-

CREATE TABLE Groceries\_List (

grocery\_list\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id),

ingredient\_count INTEGER

);

-- Recipes\_Occasions table

CREATE TABLE Recipes\_Occasions (

recipe\_occasion\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

occasion\_id INTEGER REFERENCES Occasion(occasion\_id)

);

-- recipe\_ingredient table

CREATE TABLE recipe\_ingredient (

recipe\_ingredient\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id)

);

**QUERY SQL to insert data:**

-- Insert a new user

INSERT INTO Users (username, user\_email, user\_password, user\_firstname, user\_lastname)

VALUES ('annabanana', 'ann@email.com', 'pass123', 'Ann', 'Banana');

-- Insert a new recipe

INSERT INTO Recipe (recipe\_title, recipe\_privacy, recipe\_instruction, recipe\_imageURL, recipe\_comments, ingredients\_amount, user\_id)

VALUES ('Shrimp Spring Rolls', true, 'Boil shrimp, Wash Veggies, Roll in Rice Paper, Make Dipping Sauce', 'yummyspringroll.jpg', 'Delicious recipe!', 'Yummy', 1);

-- Insert ingredients for the recipe

INSERT INTO Ingredients (ingredient\_name, ingredient\_description)

VALUES ('Shrimp', 'Shrimp for protein'),

('Veggies & Herbs', 'Veggies for daily greens that you like'),

('rice paper', 'soft but chewy rice paper to wrap'),

('fish sauce', '3 crabs fish sauce brand');

-- Get the ingredient IDs for the recipe

SELECT ingredient\_id FROM Ingredients WHERE ingredient\_name IN ('Shrimp', 'Veggies & Herbs', 'rice paper', 'fish sauce');

-- -- -- Insert the recipe's ingredients into the recipe\_ingredient table

INSERT INTO recipe\_ingredient (recipe\_id, ingredient\_id)

VALUES (1, 1), (1, 2), (1, 3), (1, 4);

-- -- -- Insert a new occasion

INSERT INTO Occasion (user\_id, Occasion\_name, Occasion\_date, Occasion\_description)

VALUES (1, 'Weekend\_lunch', '2023-07-22', 'Lunch during the weekend when I want something healthy and have time to make fresh spring rolls');

-- -- display all the tables to check

SELECT \* FROM users;

SELECT \* FROM Recipe;

SELECT \* FROM Groceries\_List;

SELECT \* FROM Ingredients;

SELECT \* FROM Occasion;

\*\*Schema (PostgreSQL v15)\*\*

-- Ingredients table -

CREATE TABLE Ingredients (

ingredient\_id SERIAL PRIMARY KEY,

ingredient\_name VARCHAR,

ingredient\_description TEXT

);

-- User table-

CREATE TABLE Users (

user\_id SERIAL PRIMARY KEY,

username VARCHAR(32) UNIQUE,

user\_email VARCHAR(32) UNIQUE,

user\_password VARCHAR(32),

user\_firstname VARCHAR(32),

user\_lastname VARCHAR(32)

);

-- Occasion table -

CREATE TABLE Occasion (

occasion\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

Occasion\_name VARCHAR(100),

Occasion\_date DATE UNIQUE,

Occasion\_description TEXT

);

-- Recipe table-

CREATE TABLE Recipe (

recipe\_id SERIAL PRIMARY KEY,

recipe\_title VARCHAR(100),

recipe\_privacy BOOLEAN,

recipe\_instruction TEXT,

recipe\_imageURL TEXT NULL,

recipe\_comments TEXT NULL,

ingredients\_amount TEXT,

user\_id INTEGER REFERENCES Users(user\_id)

);

-- Groceries\_List table-

CREATE TABLE Groceries\_List (

grocery\_list\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id),

ingredient\_count INTEGER

);

-- Recipes\_Occasions table

CREATE TABLE Recipes\_Occasions (

recipe\_occasion\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

occasion\_id INTEGER REFERENCES Occasion(occasion\_id)

);

-- recipe\_ingredient table

CREATE TABLE recipe\_ingredient (

recipe\_ingredient\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id)

);

### **Results: (Markdown)**

### 

\*\*Schema (PostgreSQL v15)\*\*

-- Ingredients table -

CREATE TABLE Ingredients (

ingredient\_id SERIAL PRIMARY KEY,

ingredient\_name VARCHAR,

ingredient\_description TEXT

);

-- User table-

CREATE TABLE Users (

user\_id SERIAL PRIMARY KEY,

username VARCHAR(32) UNIQUE,

user\_email VARCHAR(32) UNIQUE,

user\_password VARCHAR(32),

user\_firstname VARCHAR(32),

user\_lastname VARCHAR(32)

);

-- Occasion table -

CREATE TABLE Occasion (

occasion\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

Occasion\_name VARCHAR(100),

Occasion\_date DATE UNIQUE,

Occasion\_description TEXT

);

-- Recipe table-

CREATE TABLE Recipe (

recipe\_id SERIAL PRIMARY KEY,

recipe\_title VARCHAR(100),

recipe\_privacy BOOLEAN,

recipe\_instruction TEXT,

recipe\_imageURL TEXT NULL,

recipe\_comments TEXT NULL,

ingredients\_amount TEXT,

user\_id INTEGER REFERENCES Users(user\_id)

);

-- Groceries\_List table-

CREATE TABLE Groceries\_List (

grocery\_list\_id SERIAL PRIMARY KEY,

user\_id INTEGER REFERENCES Users(user\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id),

ingredient\_count INTEGER

);

-- Recipes\_Occasions table

CREATE TABLE Recipes\_Occasions (

recipe\_occasion\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

occasion\_id INTEGER REFERENCES Occasion(occasion\_id)

);

-- recipe\_ingredient table

CREATE TABLE recipe\_ingredient (

recipe\_ingredient\_id SERIAL PRIMARY KEY,

recipe\_id INTEGER REFERENCES Recipe(recipe\_id),

ingredient\_id INTEGER REFERENCES Ingredients(ingredient\_id)

);

---

\*\*Query #1\*\*

INSERT INTO Users (username, user\_email, user\_password, user\_firstname, user\_lastname)

VALUES ('annabanana', 'ann@email.com', 'pass123', 'Ann', 'Banana');

There are no results to be displayed.

---

\*\*Query #2\*\*

INSERT INTO Recipe (recipe\_title, recipe\_privacy, recipe\_instruction, recipe\_imageURL, recipe\_comments, ingredients\_amount, user\_id)

VALUES ('Shrimp Spring Rolls', true, 'Boil shrimp, Wash Veggies, Roll in Rice Paper, Make Dipping Sauce', 'yummyspringroll.jpg', 'Delicious recipe!', 'Yummy', 1);

There are no results to be displayed.

---

\*\*Query #3\*\*

INSERT INTO Ingredients (ingredient\_name, ingredient\_description)

VALUES ('Shrimp', 'Shrimp for protein'),

('Veggies & Herbs', 'Veggies for daily greens that you like'),

('rice paper', 'soft but chewy rice paper to wrap'),

('fish sauce', '3 crabs fish sauce brand');

There are no results to be displayed.

---

\*\*Query #4\*\*

SELECT ingredient\_id FROM Ingredients WHERE ingredient\_name IN ('Shrimp', 'Veggies & Herbs', 'rice paper', 'fish sauce');

| ingredient\_id |

| ------------- |

| 1 |

| 2 |

| 3 |

| 4 |

---

\*\*Query #5\*\*

INSERT INTO recipe\_ingredient (recipe\_id, ingredient\_id)

VALUES (1, 1), (1, 2), (1, 3), (1, 4);

There are no results to be displayed.

---

\*\*Query #6\*\*

INSERT INTO Occasion (user\_id, Occasion\_name, Occasion\_date, Occasion\_description)

VALUES (1, 'Weekend\_lunch', '2023-07-22', 'Lunch during the weekend when I want something healthy and have time to make fresh spring rolls');

There are no results to be displayed.

---

\*\*Query #7\*\*

SELECT \* FROM users;

| user\_id | username | user\_email | user\_password | user\_firstname | user\_lastname |

| ------- | ---------- | ------------- | ------------- | -------------- | ------------- |

| 1 | annabanana | ann@email.com | pass123 | Ann | Banana |

---

\*\*Query #8\*\*

SELECT \* FROM Recipe;

| recipe\_id | recipe\_title | recipe\_privacy | recipe\_instruction | recipe\_imageurl | recipe\_comments | ingredients\_amount | user\_id |

| --------- | ------------------- | -------------- | ----------------------------------------------------------------- | ------------------- | ----------------- | ------------------ | ------- |

| 1 | Shrimp Spring Rolls | true | Boil shrimp, Wash Veggies, Roll in Rice Paper, Make Dipping Sauce | yummyspringroll.jpg | Delicious recipe! | Yummy | 1 |

---

\*\*Query #9\*\*

SELECT \* FROM Groceries\_List;

There are no results to be displayed.

---

\*\*Query #10\*\*

SELECT \* FROM Ingredients;

| ingredient\_id | ingredient\_name | ingredient\_description |

| ------------- | --------------- | -------------------------------------- |

| 1 | Shrimp | Shrimp for protein |

| 2 | Veggies & Herbs | Veggies for daily greens that you like |

| 3 | rice paper | soft but chewy rice paper to wrap |

| 4 | fish sauce | 3 crabs fish sauce brand |

---

\*\*Query #11\*\*

SELECT \* FROM Occasion;

| occasion\_id | user\_id | occasion\_name | occasion\_date | occasion\_description |

| ----------- | ------- | ------------- | ------------------------ | ----------------------------------------------------------------------------------------------- |

| 1 | 1 | Weekend\_lunch | 2023-07-22T00:00:00.000Z | Lunch during the weekend when I want something healthy and have time to make fresh spring rolls |

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[View on DB Fiddle](https://www.db-fiddle.com/f/tw2ZC8DrDX36BDZd7ZXhd4/0)