SQL Data Modeling Lab 10/06/21
Recipe/Grocery List App

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

Brainstorming/Data Needed:

- User Name
- User Email
- User Password
- User ID
- Profile Picture
- Recipe ID
- Recipe Instruction
- Recipe Picture
- Recipe Ingredients
- Public/Private Boolean
- Grocery List ID
- Occasions id
- Occasion Recipes
- Other people's recipe IDs
- Ingredient id?
- Occasion Picture
- Recipe title

Tables:

- User Table:
  This will hold user information
  - User_id
  - Email
  - Password
  - First Name
  - Last Name.
  - Profile Picture

- Recipes Table:
  This will hold recipe information and
  Link to ingredients
  - Title
  - Picture
  - Ingredient id
  - Instructions
  - Is public (true or false)
  - Author of post user_id

- Occasion Table:
  This will hold the occasion information and
  link to the recipes
  - Occasion_id
  - Occasion name
  - Recipe ID
  - Picture

- Recipe_user Table
  This will link the recipes to the users
  - User id
  - Recipe id

- Grocery List Table
  This will hold the grocery list and link it to the user and the recipe, and the
  - grocery_list_ id
  - User_id
  - recipe_id

- Ingredient Table:
  This will hold the ingredients
  - Ingredient id
  - Name of ingredient

Relationships:

- One to one
    - User => private recipe
- One to many
    - Author => recipe
- Many to Many
    - Users => recipes
    - Ingredient => recipe
    - Recipes => Occasions
    - Ingredients => recipe => grocery list

Columns:

- User Table:
    - user_id SERIAL PRIMARY KEY, **(storing to refer to, wanted a unique number)**
    - email VARCHAR(30), **(storing for verification/log in, emails are made of various characters.)**
    - password VARCHAR(500), **(storing for verification/log in, wanted to allow for multiple types of characters)**
    - first_name VARCHAR(30), **(storing for user information, name is characters)**
    - last_name VARCHAR(30), **(storing for user information, name is characters)**
    - profile_picture TEXT **(storing for user information, text is img url)**

- Recipes Table:
    - recipe_id SERIAL PRIMARY KEY, **(storing for reference, wanted unique number)**
    - title VARCHAR(50), **(identifies recipe, allows for multiple characters)**
    - picture TEXT, **(showcases recipe, text is img url)**
    - instructions VARCHAR(1000), **(describes how to make recipe, allows for various characters in instructions)**
    - is_public BOOLEAN **(identifies recipe as public or private, just need a true or false)**

- Occasion Table:
    - occasion_id SERIAL PRIMARY KEY, **(storing for reference, wanted unique number)**
    - occasion_name VARCHAR(30), **(allows user to make an occasion name)**
    - user_id INTEGER NOT NULL REFERENCES user(user_id), **(refers back to user id to link user to user's occasions)**
    - recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id), **(refers back to recipes to keep track of recipes user has stored in their occasion)**
    - picture TEXT **(adds a visual to occasion, text is img url)**

- Recipe_user Table **(glue for users and recipes)**
    - user_id INTEGER NOT NULL REFERENCES user(user_id),**(refers back to user id to link user to user's recipes)**
    - recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id)**(refers back to recipe id to link recipe to users who use it)**

- Grocery List Table
    - grocery_list_id SERIAL PRIMARY KEY, **(storing for reference, wanted unique number)**
    - user_id INTEGER NOT NULL REFERENCES user(user_id), **(refers back to user to identify who owns the grocery list)**
    - recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id) **(refers back to recipe to grab ingredients for the list)**

- Ingredient Table: **(Master list of all ingredients used in recipes on the site)**
    - ingredient_id SERIAL PRIMARY KEY, **(storing for reference, wanted unique number)**
    - ingredient_name VARCHAR(30) **(storing to keep track of ingredients used on the site, allows users to input ingredient names with various characters)**

- Recipe_Ingredient Table: **(glue for recipes and the ingredients they use)**
    - recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id), **(refers back to the recipes to show what recipes use the ingredients)**
    - ingredient_id INTEGER NOT NULL REFERENCES ingredients(ingredient_id) **(refers back to ingredients to identify which ingredients go with which each recipe)**

SQL Code:

```
CREATE TABLE users(
  user_id SERIAL PRIMARY KEY,
  email VARCHAR(30),
  password VARCHAR(500),
  first_name VARCHAR(30),
  last_name VARCHAR(30),
  profile_picture TEXT
);

CREATE TABLE ingredients(
  ingredient_id SERIAL PRIMARY KEY,
  ingredient_name VARCHAR(30)
);

CREATE TABLE recipes(
  recipe_id SERIAL PRIMARY KEY,
  title VARCHAR(50),
  picture TEXT,
  instructions VARCHAR(1000),
  is_public BOOLEAN
);

CREATE TABLE recipe_ingredient(
  recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id),
  ingredient_id INTEGER NOT NULL REFERENCES ingredients(ingredient_id)
);

CREATE TABLE occasions(
```

```
  occasion_id SERIAL PRIMARY KEY,
  occasion_name VARCHAR(30),
  user_id INTEGER NOT NULL REFERENCES users(user_id),
  recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id),
  picture TEXT
);

CREATE TABLE recipe_users(
  user_id INTEGER NOT NULL REFERENCES users(user_id),
  recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id)
);

CREATE TABLE grocery_list(
  grocery_list_id SERIAL PRIMARY KEY,
  user_id INTEGER NOT NULL REFERENCES users(user_id),
  recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id)
);

INSERT INTO users
(first_name, last_name, password, email)
VALUES
('Callie', 'Schultz', 'asdfasdf', 'duh@gmail.com'),
('Daniel', 'Flyguy', 'yumyum', 'bruh@gmail.com'),
('Nancy', 'Dogooder', 'foogle18', 'southern.belle@gmail.com'),
('Daryl', 'Philbin', 'officefun', 'warehouse21@gmail.com'),
('Michael', 'Scott', 'bestboss', 'dndrmfln@aol.com');

INSERT INTO ingredients
(ingredient_name)
VALUES
('peanut butter'),
('jelly'),
('bread'),
('banana'),
('cheese'),
('bacon'),
('lettuce'),
('tomato'),
('mayonaise');

INSERT INTO recipes
(instructions, title, is_public)
VALUES
('Spread the peanut butter on one slice of bread, spread jelly on the other slice of bread. Smash the peanut butter and jelly sides together to make a delightful treat.', 'Peanut Butter and Jelly Sandwich', True),
('Spread the mayonaise on one piece of bread, then place cooked bacon, tomatoes, and lettuce on top. Place another piece of bread on top, and enjoy!', 'Classic BLT', False),
('Spread peanut butter on one slice of bread and top with banana slices. Then place another piece of bread on top! Voila, a masterpiece!', 'Elvis PBB', True);
```

```
INSERT INTO recipe_ingredient
(recipe_id, ingredient_id)
VALUES
(1, 1),(1,2),(1,3),(2,9),(2,8),(2,7),(2,6),(3,1),(3,3),(3,4);
```