- 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

- users
    - user_id
    - first_name
    - last_name
    - email
    - password
    - created
- recipes
    - recipe_id
    - author_id (FK to users)
    - name
    - instructions
    - public
    - created
- ingredients
    - ingredient_id
    - name
    - category
- recipe_ingredients
    - recipe_ingredient_id
    - recipe_id (FK to recipes)
    - ingredient_id (FK to ingredients)
    - amount
- lists
    - list_id
    - user_id (FK to users)
    - name
    - created
- list_ingredients
    - list_ingredient_id
    - list_id (FK to lists)
    - ingredient_id (FK to ingredients)
    - amount
    - created

- occasions
    - occasion_id
    - user_id (FK to users)
    - name
    - date
    - created
- occasion_recipes
    - occasion_recipe_id
    - occasion_id (FK to occasions)
    - recipe_id (FK to recipes)

- One to many
    - users-recipes
    - users-lists
    - users-occasions
- Many to many
    - recipes-ingredients
    - lists-ingredients
    - recipes-occasions
- One to one
    - none

```
CREATE TABLE users(
  user_id SERIAL PRIMARY KEY,
  first_name VARCHAR(50) NOT NULL,
  last_name VARCHAR(50) NOT NULL,
  email VARCHAR(64) NOT NULL,
  password VARCHAR(500) NOT NULL,
  created DATE NOT NULL
);

CREATE TABLE recipes(
  recipe_id SERIAL PRIMARY KEY,
  author_id INTEGER NOT NULL REFERENCES users(user_id),
  name VARCHAR(50) NOT NULL,
```

```
  instructions VARCHAR(5000) NOT NULL,
  public BOOLEAN DEFAULT true NOT NULL,
  created DATE NOT NULL
);

CREATE TABLE ingredients(
  ingredient_id SERIAL PRIMARY KEY,
  name VARCHAR(50) NOT NULL,
  category VARCHAR(50) NOT NULL
);

CREATE TABLE recipe_ingredients(
  recipe_ingredient_id SERIAL PRIMARY KEY,
  recipe_id INTEGER NOT NULL REFERENCES recipes(recipe_id),
  ingredient_id INTEGER NOT NULL REFERENCES ingredients(ingredient_id)
);

CREATE TABLE lists(
  list_id SERIAL PRIMARY KEY,
  user_id INTEGER NOT NULL REFERENCES users(user_id),
  name VARCHAR(50) NOT NULL,
  created DATE NOT NULL
);

CREATE TABLE list_ingredients(
  list_ingredient_id SERIAL PRIMARY KEY,
  list_id INTEGER NOT NULL REFERENCES lists(list_id),
  ingredient_id INTEGER NOT NULL REFERENCES ingredients(ingredient_id),
  amount INTEGER NOT NULL,
  created DATE NOT NULL
);
```

```
CREATE TABLE occasions(
  occasion_id SERIAL PRIMARY KEY,
  user_id INTEGER NOT NULL REFERENCES users(user_id),
  name VARCHAR(50) NOT NULL,
  date DATE NOT NULL,
  created DATE NOT NULL
);

CREATE TABLE occasion_recipes(
  occasion_recipe_id SERIAL PRIMARY KEY,
  occasion_id INTEGER NOT NULL REFERENCES occasions(occasion_id),
  reciepe_id INTEGER NOT NULL REFERENCES recipes(recipe_id)
);
```