Project Rossini

Project goal

The main goal is to have a flexible, searchable database of recipes of different dishes. It is also able to generate entire meals based on certain criteria.

Database

The database is a relational database created using Postgres and maintained by Flyway. The main tables of the database are the recipe table, the material table and the dish table. There are other tables such as user and benefit tables.

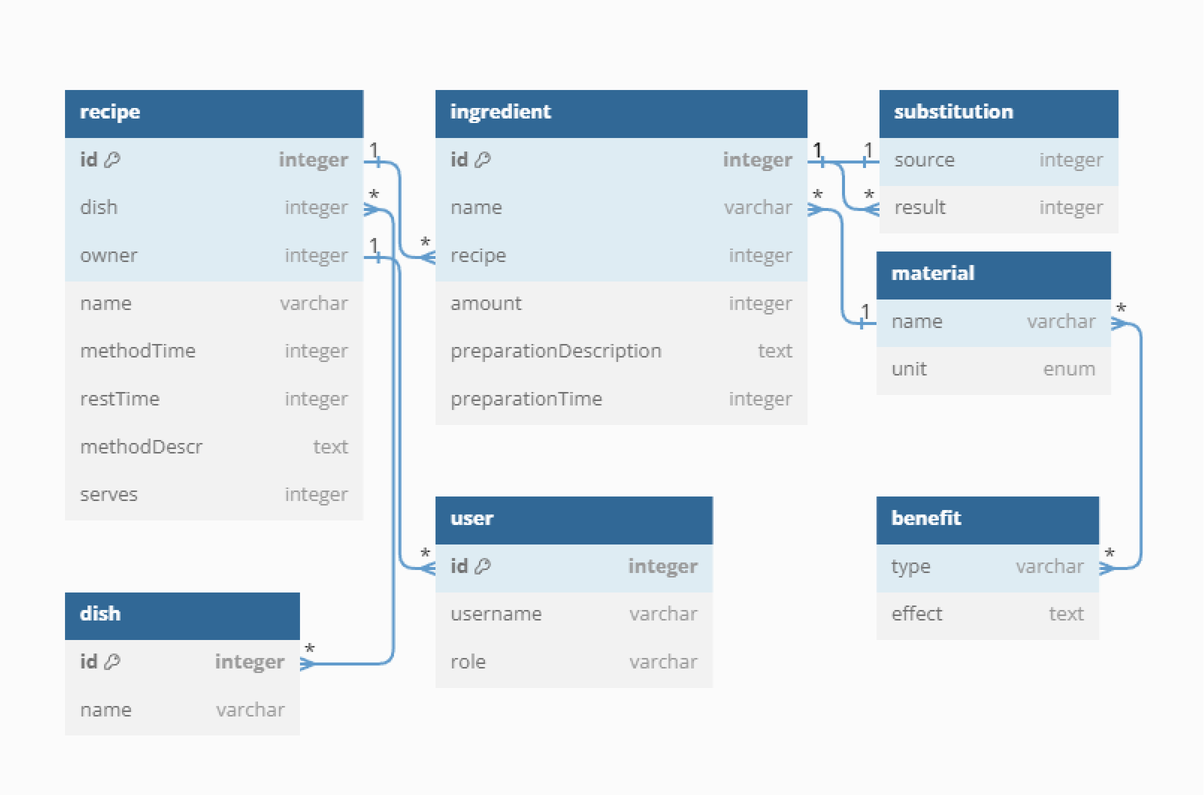

figure 1: the main tables and their relations as planned. Connection tables are omitted.

The recipe table contains all the recipes, which have a name, a description of the method (how to actually create the recipe), a time associated with the method, maybe a time for resting (some recipes specify some rest time when the cook can attend to other things) and indicate how many servings are done following the recipe. The recipe has an owner, who created the recipe in the first place. This owner always has permission to edit the recipe at a later date, even if their role changed. The recipe is part of a dish, and links to other recipes when they are part of the preparation process (such as pizza dough is part of a pizza recipe). The recipe is linked with many ingredients, which are used in the making of the recipe.

The ingredients are part of a recipe, they have an associated amount, a preparation description and preparation time. The name of the ingredient is part of another table (called "materials") with the unit of measurement associated with the ingredient. This is done, because one material can be used in different quantities and in different preparation methods, but they are the same thing in a grocery list.

Some ingredients can be substituted in a recipe, which is stored in a substitution table linking two ingredients: one which is substituted and the other which is the substitution.

Some materials have benefits (such as high vitamin or mineral content), which are indicated in a separate table linked to the materials.

The recipes are part of a larger dish, which describe an entire meal. The dishes also have a name and are associated with one or more recipes.

There is a user table as well, which includes all the users and the roles for the users.

API endpoints

There is an endpoint for manipulating recipes: a user can read one or multiple recipes. A user can create a new recipe. A recipe can be modified or even deleted by the owner of the recipe or by an administrator.

Another endpoint is to read a dish or dishes. A user can even list dishes with certain criteria, such as ingredients in the dishes, time to make the entire dish or main benefits. There is an option to generate multiple dishes (for a few meals, for example in a week).

After getting the dishes the user can generate a grocery list consisting of the ingredients necessary to make the dishes. There is an option to generate a grocery list that contains only those ingredients that are not available already (for this, the user must provide the list of already available ingredients). The ingredients can be scaled to accommodate different serving sizes from the default (which is provided with the recipe).

There is an endpoint to user management, such as sign up and login. This is also used to set the user's role by an administrator.

User management

There are multiple roles for the users, and each role has some permissions.

The basic user can search and read recipes, dishes and create grocery lists.

If a user upgrade to chef (any user can upgrade itself), they can create new recipes and then link them to dishes. Once a recipe is created, a user can always modify it, even if they loose the chef role.

Another role is dietitian, who can create new benefits and link benefits to materials. To become a dietitian an administrator has to grant the role to one.

An administrator has permission to do all the previously mentioned acts, as well as changing one user's role.

Roles can be combined; one user can be both a chef and a dietitian.