Restaurant Management Database

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Problem Statement

- Our application will help restaurants manage their recipes as well as what recipes each chef is assigned to.
  - This will help managers and chefs quickly lookup recipes, their ingredients, costs, and which chef will be making that dish.
  - A database will be used to implement the relationships between recipes, chefs, and other entities related to our restaurant management database system.

Functional Requirements

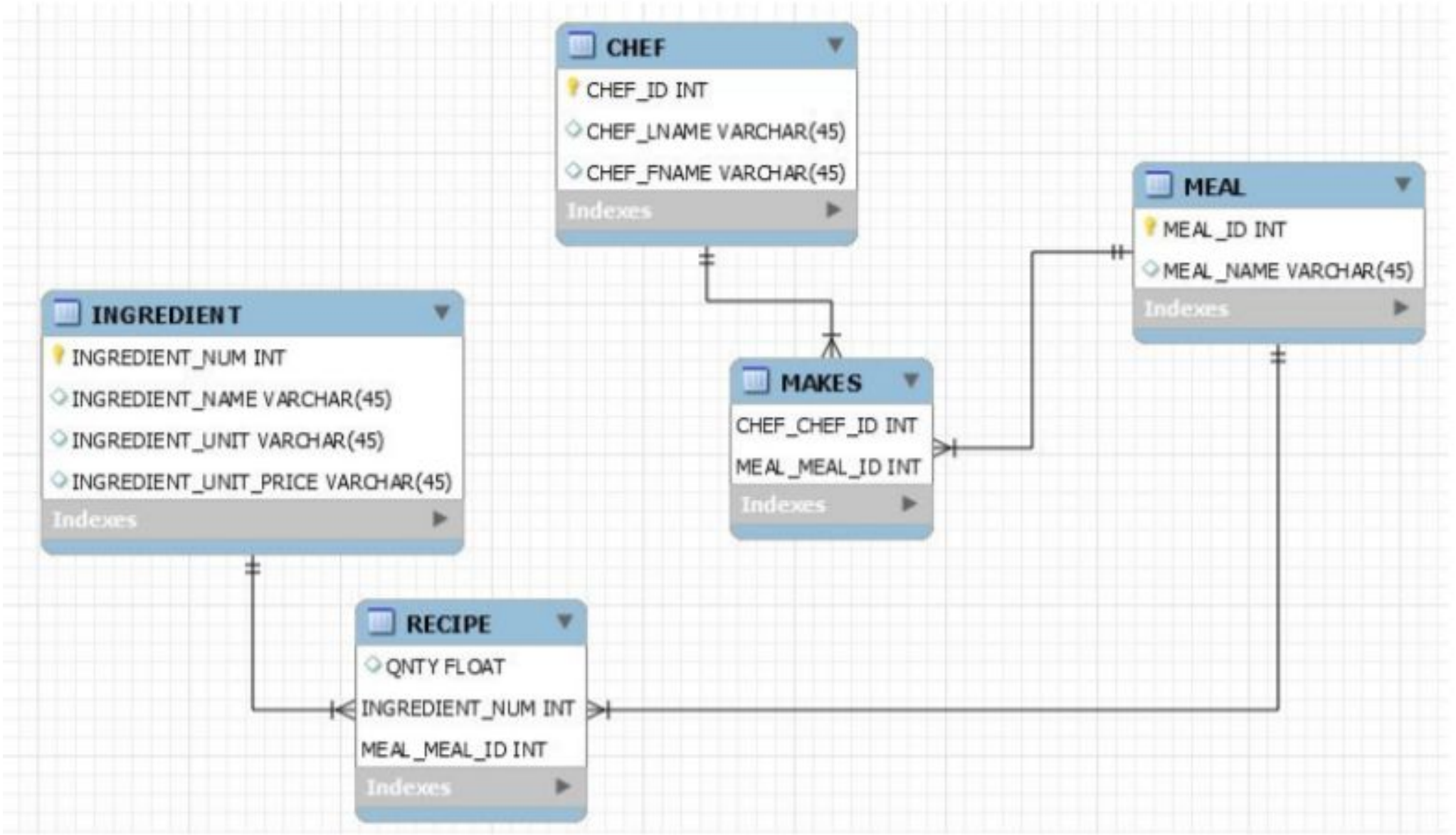
- Add a new recipe
  - Only if the recipe doesn’t already exist.
- Remove a recipe
  - Removal of recipe without removing ingredients from the DB.
- Add Ingredients
  - Only if the ingredient doesn’t already exist.
- Search for a recipes
  - By recipe name / ingredient names

Functional Requirements (Cont'd…)

- Calculate recipe price
  - Based on quantity of ingredients used and cost of each unit of ingredient.
- Assign recipes to chefs
  - Only the Manager role can do this if chef knows the certain recipe.
- Add additional chefs
  - Only the Manager role can do this if the chef doesn't already exist in the DB.

Conceptual Database Design

- The relationship in our database can be described by the following business rules:
  - Each meal may use many ingredients.
  - Each ingredient may be used in many meals, but may not be used in any meals.
  - Each chef can make many meals.
  - Each meal can be made by many chefs.


CHEF
CHEF_ID INT
CHEF_LNAME VARCHAR(45)
CHEF_FNAME VARCHAR(45)
Indexes
MEAL
MEAL_ID INT
MEAL_NAME VARCHAR(45)
Indexes
INGREDIENT
INGREDIENT_NUM INT
INGREDIENT_NAME VARCHAR(45)
INGREDIENT_UNIT VARCHAR(45)
INGREDIENT_UNIT_PRICE VARCHAR(45)
Indexes
MAKES
CHEF_CHEF_ID INT
MEAL_MEAL_ID INT
Indexes
RECIPE
QNTY FLOAT
INGREDIENT_NUM INT
MEAL_MEAL_ID INT
Indexes

Technologies Used

- Python and PyQt for the GUI design
- PyCharm and Sublime text for our IDE’s
- SQLite for database management and queries
- MySQL for modelling of our DB system
- Git and Github for version control

Demo