

Project Part 3 - Project Writeup

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Project Summary

I built a database for a hypothetical bakery. While the project's final form differs significantly from the original proposal, the completed database supports all of the originally scoped features. The difference from the proposal was that I did not complete the webapp frontend. As such, all functionality is demonstrated with a Jupyter notebook.

The completed database includes multiple tables and triggers to support a few core bakery functions. An application built on this database could manage ingredient inventory, place ingredient orders, calculate material requirements based on customer orders, and update ingredients available based on supplier management.

Motivation

The motivation for this project is based on business that my partner runs, which is a partnership that includes a partnership with a bakery. Having seen the inner workings of a small bakery, it seems that they could benefit from a database-driven application for managing their ingredient orders and product inventory and sales. This project barely scratches the surface of what would ultimately be required/useful, but it does demonstrate some of the core functionality that bakeries depend on for day-to-day operations.

Database Structure

The database includes relations that describe the core components of a bakery operation, particularly product and raw material inventory management. The database includes the following tables:

- **ingredient_metadata**: information describing ingredients available from suppliers
- **ingredient_inventory**: inventory levels for ingredients
- **supplier**: list of suppliers and their respective metadata
- **product_metadata**: list of bakery products and their descriptions
- **product_inventory**: inventory level of bakery products
- **bill_of_materials**: list of ingredients required for all bakery products
- **product_order**: list of orders placed by bakery customers
- **supply_order**: list of orders for ingredients placed by bakery personnel
- **customer**: list of bakery customers and their respective metadata

Implementation Platforms

The following tools/platforms were used for this project:

- SQLite
- Jupyter
- GitHub for code hosting and version control

The project was run locally on a MacBook.

Project Details

The full project is pushed to a public github repo. The project is fully contained in a Jupyter notebook and comes with example data in CSV format. The project can be found [here](#).

Code

Please see the attached notebook printout below: