Exercise 1.6: Connecting to Databases in Python

Learning Goals

- Create a MySQL database for your Recipe app

Reflection Questions

1. What are databases and what are the advantages of using them?

A database is a dedicated collection of data that is organized into a structure. Their biggest advantage is allowing you to easily access, manage, and update your data. Storing data in this way allows it to be accessed again after a session is ended by a user, which is another incredibly useful advantage.

2. List 3 data types that can be used in MySQL and describe them briefly:

Data type	Definition
VARCHAR(size)	Variable length string. Size parameter can be used to specify the maximum accepted length of the string.
INT(size)	An integer. Size parameter can be used to specify the maximum display width
DATE	A calendar date. Standard format is YYYY-MM-DD

3. In what situations would SQLite be a better choice than MySQL?

In general, SQLite is best suitable for smaller databases as you can see a drop in performance optimization as a database grows and the memory requirement increases. Some good examples of SQLite uses include a webpage for a small shop that is storing customer's email addresses, low to medium traffic record keeping programs, it can even be used to test a database without having to setup an entire database engine.

4. Think back to what you learned in the Immersion course. What do you think about the differences between JavaScript and Python as programming languages?

I think the biggest stand out to me is that Python just feels more accessible. It seems easier and more intuitive to accomplish certain tasks and has a plethora of built in methods that are incredibly useful. When comparing these operations to writing in JavaScript it seemed like more code was needed to get the same result.

5. Now that you're nearly at the end of Achievement 1, consider what you know about Python so far. What would you say are the limitations of Python as a programming language?

While it can be touted as an advantage, I think Python's simplicity is also a disadvantage. I could see someone getting comfortable writing in Python and then feeling like other languages are more complicated. Additionally, Python's memory consumption is high due to the flexibility of its data types. This makes Python a bad choice for memory intensive tasks.