9.1.4

Getting Started with SQLite

We'll be using SQLite to store the weather data that W. Avy shared with us and that we'll need for our analysis.

You know there is a slight possibility that W. Avy will ask you to duplicate this process in the future (to open other shops, or if Oahu doesn't turn out to be a good fit). So, as you work through the process of getting started with SQLite, you make a note to make sure to take your time and really understand what you are doing so that you can do it again in the future.

SQLite provides a quick way to setup a database engine without requiring a server. It's essentially a flat file, but with most of the major capabilities of an SQL database—just like how a "lite" version of ice cream is basically ice cream, but with less fat.

You can compare SQLite databases to a CSV or Excel file: each SQLite database can have one or more tables with columns and rows, and it is stored as a file on your computer. The key difference between SQLite databases and a CSV or Excel file is that we can write queries for it.

SQLite Advantages

While there are a few specific use cases for SQLite, we'll be focusing on how it can be beneficial to you and where you might get the most value from it. The main advantages are:

- **It's local.** One of the core advantages of SQLite is that it allows you to create databases locally on your computer to support testing and easy prototyping. This is beneficial, because if you want to test something out and you need a database, it's not always the most convenient to set up a SQL database server just to try something out.

- **There's an app for that.** Another advantage of SQLite databases are that they can be used on a mobile phone app. Most mobile phone games will use an SQLite database to store certain information about you or your players statistics. While we won't be creating a mobile app in this module, it's still helpful to understand the full context.

SQLite Disadvantages

SQLite also has a couple of disadvantages, however. They are:

- **It's local.** If you've used a MYSQL database before, you might have noticed that you can have multiple users access the database. With SQLite, there are no users. SQL is local: stored on one computer or phone. So, only that computer or phone will have access.
- **There are fewer security features:** one other disadvantage to be aware of is that SQLite doesn't have as many security features as a traditional SQL database. While it's not something specifically to be concerned with for this module, just keep that in mind as you create other databases later on.

Good work with SQLite! Now let's move on to SQLAlchemy.

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