Exercise 1.6: Connecting to Databases in Python

Reflection Questions

1. What are databases and what are the advantages of using them?
   ANSWER: Databases are systems for storing structured information, and managing data effectively. Benefits include well-organized data, precision, easy and remote retrieval, security, concurrent access, scalability, minimal duplication, backup, analysis facilitation, and aiding app development.

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

Data type	Definition
INT	Standard Integers
VARCHAR(n)	String of varying length, with n representing the maximum amount of characters
FLOAT	Floating-point decimal numbers

3. In what situations would SQLite be a better choice than MySQL?
   ANSWER: SQLite is suitable for simpler applications with limited concurrent users, like mobile apps or desktop software. It's a file-based, serverless database, better for single-user scenarios or when a full-fledged server setup isn't needed. MySQL is preferable for complex applications with higher data volumes, multiple users, and web-based systems requiring concurrent access, as it offers robust client-server architecture and performance optimization for larger-scale deployments.

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?

   ANSWER: Overall structure seems to be similar, however Python is more straightforward and readable.
   Although, package management seems a bit more complicated on the python side.

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?
   ANSWER: So far, I don't see limitations, just that setting up the environment properly might be a bit difficult at first, especially making sure that in a team setting everyone has it right.