Exercise 1.6: Connecting to Databases in Python

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

   Databases are organized collections used to store data. They have many advantages, but they provide data organization, data security, and data standardization to name a few.

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

Data Types	**Definitions**
INT	Standard integers
VARCHAR(n)	A variable length string with a max number of characters (n)
FLOAT	A floating-point decimal number. Generally used for numbers not classified as an INT

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

   SqLite will be more beneficial the smaller or more simple your project is. It is made to be a portable version of MySQL without needing any installation or setup to work. A good use case would be if you need to test a new database quickly, you can get in and immediately use SQLite without having to set up an entire engine first
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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?**

   Python feels a lot more streamlined and simpler than Javascript does. This is mainly due to Python's straightforward syntax and fewer variables, which results in cleaner code overall. Javascript likely has the edge in flexibility for more complex projects, but for a simple app this size Python feels like the superior option.

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?**

   The biggest weakness of python is its single thread execution. This causes Python to quickly grow sluggish whenever it needs to perform more demanding tasks. This keeps python mainly as a backend tool, as many front-end applications are too much for it.