Reflection Questions Exercise 1.6

1. **What are databases and what are the advantages of using them?**
   Databases are organized collections of data. They help standardize storage format and provide better security of access to the information itself. Additionally, information stored in a database instead of a local file can then be accessed through multiple programming languages.
2. **List 3 data types that can be used in MySQL and describe them briefly:**
   INT – represents standard integers (whole numbers)
   FLOAT – includes floating-point decimal numbers
   DATETIME – datetime values
3. **In what situations would SQLite be a better choice than MySQL?**
   SQLite is better for smaller-scale projects with few concurrent users, while MySQL is better suited for larger projects that need to support a lot of users at once. SQLite will read a large database faster than MySQL, however , again, when it comes to concurrent user load, MySQL is a better option.
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?**
   So far Python feels a bit more straightforward than JS. However, this might just be due to how early in my learning process I am. When it comes to overall formatting, I prefer JS; so far, it's a bit easier to write cleaner code. However, Python has a big advantage in how many modules it comes with from the beginning, making it easy to get a project going. JS on the other hand, always requires extra modules or frameworks to be collected and loaded first.
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?**
   I'm a very new Python user, and the only disadvantage I can think of is its dynamic typing structure. On one hand, I like this feature – it makes coding easier, more flexible. On the other hand, it can lead to a lot of errors down the road if I as a developer lose track of a variable and (for example) try to perform a mathematical equation with a string type value. This makes my code just a little bit more error-prone and I can see that becoming an issue on larger-scale projects.