### Exercise 1.6: Connecting to Databases in Python

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

A Database is an organized collection of structured information or data, typically stored electronically in a computer system. Using databases allow us to keep the data persistent even when your script finishes executing. And they keep data in a standardized format so that you can easily store or access it

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

|  |  |
| --- | --- |
| **Data type** | **Definition** |
| VARCHAR(n) | String of variable length, with (n) representing the max number of characters |
| INT | Standard integer |
| FLOAT | Floating point decimal numbers |

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

When you want to work with simple databases or when you just want to test database without having to set up an entire database engine, using SQLite would be ideal as it doesn’t require installation or set up. With SQLite, you can store data in simple .db files and easily access and modify these files directly from your application.

1. 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 that the approach, logic and concepts are similar between JavaScript and Python but Python is more organized (specially when using OOP) and uses simpler syntax which makes the code easy to maintain. However Python needs interpreter to run the code whereas most of major browsers have built-in support to execute JavaScript.

1. 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?

Python is interpreted and it sometimes results in slow execution. Python is not ideal for client-side programming but exclusively used in backend programming.