Exercise 1.1: Getting Started with Python

Learning Goals

- Summarize the uses and benefits of Python for web development
- Prepare your developer environment for programming with Python

Reflection Questions

1. In your own words, what is the difference between frontend and backend web development? If you were hired to work on backend programming for a web application, what kinds of operations would you be working on?

The frontend of a web application is the interface that users can see and interact with, while the backend comprises the server-side operations, such as the database, APIs, and business logic layer. If I were hired to work on a web app's background programming, I could expect to work on structuring the database, defining API endpoints for data sending and retrieval, implementing user authentication and authorization, and ensuring server-side security.

2. Imagine you're working as a full-stack developer in the near future. Your team is asking for your advice on whether to use JavaScript or Python for a project, and you think Python would be the better choice. How would you explain the similarities and differences between the two languages to your team? Drawing from what you learned in this Exercise, what reasons would you give to convince your team that Python is the better option?
   (Hint: refer to the Exercise section "The Benefits of Developing with Python")

Python and JavaScript are both dynamically typed, have strong community support, and are enhanced by a wide variety of packages and libraries that extend their functionality by speeding up the development process. In addition to these strengths, Python is also known for being relatively easy to read and understand, which makes writing, maintaining, and debugging code easier. Python also comes with more features "out-of-the-box" such as URL routing, form handling/validation, session handling, web security, and has its own built-in package management system (pip) that simplifies the installation of open-source packages in the project. All of these advantages equate to a faster and smoother development process.

3. Now that you've had an introduction to Python, write down 3 goals you have for yourself and your learning during this Achievement. You can reflect on the following questions if it helps you. What do you want to learn about Python? What do you want to get out of this Achievement? Where or what do you see yourself working on after you complete this Achievement?

a. Enhance my knowledge of backend development
b. Feel prepared to build a simple Python project on my own
c. Learn how to write scripts to automate tasks