### 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?
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”)*

1. 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?

Question 1 :

While frontend development focus on creating UI and UX using technologies like html, css and javascript, backend development involves creating the server side of an application, creating the business logic and managing databases.

As a backend developer I would be expected to manage authentication and authorization of users, develop APIs, incorporate middleware for such tasks as logging,security and request-response manipulation, testing and implementing secuirity best practices to protect against common vulnerabilities(SQL injections..)

Question 2:

Python and javascript are both object-oriented high level languages that can work on multiple platforms and support dynamic typing.

They are extremely versatile and both have strong communities that provide extensive documentation, third party libraries and community support.

That being said while Javascript can be found both on the backend and the frontend, python is more often used on the server-side using frameworks like django and flask.

Python’s syntax is also cleaner and readability is helped by indentation when compared with Javascript’s .

In the end, readability and the availability of a great variety of third party libraries would make it a good choice to opt for python for the project, especially in the optic of scalability.

Question 3:

1. I want to learn how to use python in the backend
2. I want to learn more about object-oriented programming.
3. I would like to learn the basics of data analysis