Exercise 1.1 Reflection Questions

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?

Frontend development is the creation of the user-interface and the development of the client-side code for an application. Frontend developers create code that renders the user-facing interface and interprets the data served to the client by the server or backend. Backend developers create the server and write the logic that determines what data or files to serve to the client in addition to handling all of the database interactions. Additionally, backend developers create the authentication logic to ensure data is securely handled when client requests are made. Application programming interfaces (APIs) are the data that is served to the client side.

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?

There are several factors that come into play when deciding what language to use in the development of a new project. Depending on the size of the team and plans to expand the team in the future, Python's more human-readable syntax may assist in the onboarding of new team members.

Both JavaScript and Python are used in web development, but there are many niche projects that cause Python to succeed in comparison to JavaScript. For instance, Python's community is particularly strong in Data Science and Machine Learning, and many of Python's libraries have large community support.

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?

1. I would love to understand the foundations of machine learning as we begin to develop with Python. I haven't taken an in-depth view of the content of these two

achievements, but if machine learning isn’t touched in the curriculum, I can always spend some more time with that in the future.

2. I am hoping to be able to begin writing python programs without needing to spend excessive time debugging syntax errors. Ultimately I would love to be able to “switch” syntax muscle memories when I am switching programming languages. I have experience in building basic programs with Python, so diving deeper into the libraries and frameworks of Python would be helpful.

3. I definitely see myself working on projects that use Python. On day one, I don’t know how to create extensive applications with Python, but as the content continues, I know I will get more comfortable visualizing the components of a Python application.