Learning Journal 1.1 & 1.2

1.1

1. There is a significant difference between a Frontend Developer and a Backend Developer:
   - Frontend: focuses more on creating and designing the user interfaces and how a user will be interacting with the app.
   - Backend: focuses on the server-side of an app to ensure the functionality of the app and ensure all the data is being passed correctly.

     Some of the operations a backend developer would be working on is managing databases, creating/optimising API's and adapting security protocols/measures for the app.

2.

Similarities	Differences
High-level scripting languages	Python has clean and readable syntax
Cross-platform	Python is a strong dynamically typed language
Object-oriented programming	Python has wider range of applications
Large and active communities	

3. For this achievement my goals are:
   - Learn how to code simple applications with Python
   - Have a deep understanding of how functions and file handling works in Python
   - I want to work on a side project by myself using Python and its libraries

1.2

1. The IPython Shell provides a more user-friendly interactive environment such as tab completion, syntax highlighting and more tools such as "magic" commands.

2.

Data Type	Definition	Scalar or Non-Scalar?
Tuples	Linear arrays which can store multiple values of any type	Non-Scalar
Strings	Sequence of characters wrapped in quotes	Non-Scalar
Integers	Includes both negative and non-negative numbers, no theoretical limit	Scalar
Bool	Stores two types of values: *True* or *False*	Scalar

3. The difference between Tuples and Lists are as follows:
   - Lists: are mutable which means we can change, add or remove elements from the list created. The syntax also differs, we use square brackets '[]'.
   - Tuples: are immutable, once it is created their elements cannot be modified. The syntax we use is parentheses '()'.

4. For this application the best option would be to use Dictionaries at the data is stores in key-value pairs, it also offers flexibility and readability and lastly they are mutable, so if the user progresses or wants to adjust they can.