**Comparison Document:**

1. **Assembly Reflections**

* 1. What did you notice about registers and instructions?
  2. In assembly, we have to manually manage registers and memory in cpu.
  3. Instructions are complex and difficult to understand and performs small tasks.

○ How is coding in Assembly different from Python?

Assembly is a low level language very close to machine language(binary) so it is difficult to use and understand by humans. But python is simple, easy to use and more human readable.

1. **Python Reflections**

* 1. Why is Python easier/faster for building the same project?
  2. Python is classified as easier language and good for projects like AI due to its easy to use function. It provides built in libraries and many features. We don’t need to write a long code for simple functions

○ Which features of Python help abstraction (variables, functions, loops)?

In python we don’t need to work out with complex hardware functions like memory handling and registers. It is done by itself. In addition it provides many features like variables’ loops etc.

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| **Feature** | **Assembly**  **Example** | **Python Example** | **Notes** |
| Variable storage | Register (EAX) | x = 5 | In assembly we have to manually manage registers but we don’t need it in oython |
| Printing output | INT 21h | print() | In python printing of output is easy and of one line but in assembly even print requires a step by step code |
| Arithmetic | ADD AX, BX | x + y | In python we just need to code for adding two variables but in assembly even this requires us to move digits to registers, manage storage and then add. |