Programming Report (Week 1)

Over the past one week, I have gained a lot of valuable knowledge that is helping me academically, ethically and personally. This learning experience has deepened my understanding of Python (programming, how computers work, variables and syntax and semantics).

One of the key things I learnt is how the CPU works, it’s the brain of the computer and must work with memory. And under the memory we got to know of the primary and secondary memory.

The primary memory is the foundation of the CPU and is also directly connected to the CPU. It consists of RAM (Temporary storage) & ROM (Permanent storage).

We also have the secondary memory which consists of HDD (Hard Disk Drive) but isn’t directly connected to CPU. It is also metallic, circular in nature and uses electro-magnetic fields that are formed by applying electricity on a moving a metal like a CD in a DVD player.

I also got to know that the CPU can’t work a computer that isn’t partitioned.

And what is partition? (It is to create a virtual memory unit on a hard disk.)

And why do we partition? (For easy file management & retrieval)

Note; Always identify / name your memory addresses after partitioning.

CPU- Deals with the address of the data. Processes data.

Cache- Stores frequently accessed data. (e.g call log / history)

RAM- 1st to load data, restore your memory.

Hard disk- Hardware storage component.

Note; A variable is a renamed memory space by a software engineer.

A register is a virtual memory created & managed by OS of a computer. (Its also part of RAM)

Another lesson that stood for me was Variables. We learnt the syntax and semantics of variables.

A variable can’t start with a number, a capital letter, shouldn’t have spaces in between, special key words, avoid using unmeaningful & long variable names and incase of a compound, use an \_ or camel case (put a capital letter in the middle of your variable name) e.g numPopulation.

I also noted that in python we declare and assign at the same time, we don’t declare memory spaces & leave them empty but rather U must have a value for the memory space before U declare.

We also learnt about operators and understood how they work. We were able to print our first operator codes.

One last thing I learnt is Problem solving which is essential for most employers. It is better to have good problem-solving skills than know all programming languages.

Steps to solve a problem.

Understand (If U can explain it in plain English, then U get it.)

Plan (Analyze the problem.)

Divide (It is easy to solve a problem in smaller bits. Start with the easiest then the hardest, once done, connect the dots.)

And incase U get stuck;

Debug (Go step by step to find where U went wrong)

Reassess (Take a step back & look at it from another view, U can delete & start afresh)

Research (No matter the problem U have, someone out there has a solution for it.)

Caveat (1st try to solve the problem on ur own bcz it’s the best way U will learn.)

Practice (It’s only a matter of time before U know a solution for problems)

In summary, this past week has been full of exciting discovering that are educational. I just want to say that each time U learn something new, U develop strength, wisdom, confidence &perspective. I look forward to learning more in Week 2 with Ozzy and our coaches Mable & Kenneth.