MY TAKE AWAYS FROM THE FIRST WEEKS LESSION IN THE PYHON CLASS

Programming is the art and science of writing a computer instruction using a computer language. There are two components a computer which includes,

-Central processing unit (CPU); which is the brain of the computer.

-Memory; which is virtual

NB: but we shall focus on memory



We have two types of memory which includes;

* Primary memory e.g. (ROM; which has permanent instruction and not volatile), (RAM; which is directly accessed by the CPU and is volatile
* Secondary memory e.g. Hard disk (main memory)



* NB: A hard disk is a circular metallic memory which uses electro-magnetic fields to read and write. Electro-magnetic is produced when electricity is applied over a rotating circular metal.
* I also got to know that a computer

|  |
| --- |
| CPU |
| Registers | |
| Cache | |
| Main memory | |  |
| Magnetic disk | | | |
| Magnetic tape | | | | |

-cache is a memory that stores frequently accessed files.

-Registers is a high-speed storage location in the CPU and performs tasks like stores memory addresses, others hold instructions, and some track the status of processes.it stores this temporarily as the CPU processes them.

PARTITIONING: when a new computer is bought, one has to partition it.

Partitioning is the process of creating o marginal units of memory and giving it an address.

Partition is a block of memory spaces on a hard disk. And each memory unit has an address.

* Therefore, when a song is stored on the hard disk and it is playing ,the addresses are loaded on the RAM and stored in the cache memory temporarily ,where it is then sent to the CPU processing the CPU only works on the addresses. It is vice versa as long as the song is playing.
* The addresses should have variable names like num1
* There are also two modes we use in python programming i.e. script mode and transformation mode.

# Syntax and semantics

-Syntax is the set of rules governing the use of a programming language.

-Semantics is the meaning of what you have written.

# There are also some rules followed when writing variable names and they include,

-Don’t leave spaces when writing variable names

-Don’t use special keys when writing variable names like if , else , etc.

-Don’t use capital letters for variable names

-Don’t start variable names with a number.

-Incase of a composite, use underscore like my salary

-avoid using unrelatable variable name. Like x, y, z

-avoid using longer variable names.

OPERATORS; This is a word, symbol and character that tells a computer what to do with an operand.

-An operand is a value

# Various categories of operands

-logical operators -Arithmetic operators

-comparison operators -Assignment operators

-bitwise operators -special operators

1.comparison operators e.g. num1 == 30

2.Arithmetic operators

.EXAMPLE

-addition operators e.g. num1, num2 = 20, 30

Print (num1 + num3)

-subtraction; print (num1 – num2)

-power; print (num1 \*\* num2)

-flow division; (num1 // num2)

-module;

3.assignment operators e.g. num4 = 200

-addition (+=)

-subtraction (-=)

-division (/=)

Important definitions

Python script;(is a file of python code with an extension of .py)

Module;(is a python script)

Code;(is a group pf statement)

Statement;(is a complete instruction given to a computer)

Declaring;(is a process of creating a valid programming variable)

Initialize/ assignment;(is the process of giving a variable name)

Python package;(is a folder with python a special file)

NB: In python, we initialize and assign at the same time