C PROGRAMMING NOTES

What is code?

* Code refers to a set of instructions written in a programming language that a computer can understand and execute.

What is coding?

* Coding is the process of writing code.

What is program?

* A program is a complete set of code that performs a specific task.

What is programming?

* Programming is the broader process of creating programs.
* It involves planning, designing, writing, testing, and debugging code.
* Coding is one of the part of programming.

Types of programming: -

1. Procedural Programming 2. Object-oriented Programming

What is programming language?

* A programming language is a special set of instructions with its own grammar and syntax, just like English or French.
* There are many different programming languages, each suited for different tasks.
* For example, C,C++,Java, Python etc

Levels of programming language: -

This refers to how close the programming language is to the computer's hardware.

There are two main Levels of programming based on abstraction: -

1. Low level language
2. High level language

1.Low level language: -

* Low level languages are closer to the machine’s native language.
* These languages are more difficult to read, write and debug.
* It offers great control over computer hardware resources.
* There are two categories in low level language.

1. Machine language 2. Assembly language
   * 1. Machine language: -

* It is in the form of Binary.
* Binary contains 0’s and 1’s called as bits.
* This is the most basic language that the computer can directly execute.
* Example: - 1010001001, 0010001001 etc.

ii)Assembly language: -

* This language uses Mnemonics (abbreviated codes) to represent machine code instruction.
* It is more readable than machine code instructions.
* Example: - ADD R1,R2

SUB R2,R1

2.High level language: -

* These language are designed to be easier to human to read and write.
* It is defined in English words and symbols.
* Writing code and debugging is easy.
* Example: - C,C++,Java, Python.