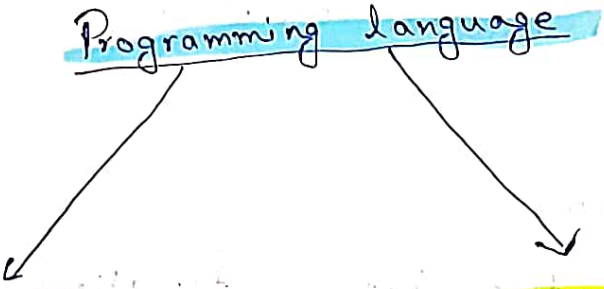
Revision of Class IX Syllabus

Unit I : Introduction to OOP (Object Oriented Programming) Concepts



High level programming language

(Understood by humans and are closer to natural language than machine language)

Low level programming language

(Closer to machine language and are designed to interact with hardware at low level)

High level language is further classified into

(I) Procedure Oriented Programming language

A programming language in which emphasis is given on the functions or procedures rather than data values is known Procedure Oriented Programming language. It mainly uses variables, statements, functions and conditional operators. Eg :- C, BASIC

(II) Object Oriented Language

Here we put emphasis on data values rather on functions. It allows the user to split the program into number of segments called 'Objects'. Eg :- C++, Java.

Principles of Object Oriented Programming (OOP)

(1) Data Abstraction

The method or process of showing the essential information about the data hiding the background details or the implementation of code to reduce complexity is called Abstraction.

(II) Encapsulation

In an OOP, the data & functions are grouped or merged together in such a way that the data items are only accessible within the functions of the same object. It provides an interface between data items of objects and calling the program.

(III) Inheritance

The mechanism in which one class acquires the features of another class is called inheritance. The class that is inherited is called superclass or Base class. One that inherits from a base class is called as Subclass, Derived class or Target.

(IV) Polymorphism

Polymorphism allows for the use of a single interface to represent multiple types of objects, making code more flexible and easier to maintain.