Object Oriented Programming

Object oriented programming is the principle of design and programming of programs using modular approach.

The procedural programming focuses on processing of instructions in order to perform a desired computation, it emphasizes more on doing things like algorithms. Used in programming languages like c and pascal.

OOP combines both data an functions that operate on that data into a single unit called object. It follows bottom-up approach.

Another major component that plays a major role in OOP is the class. It is the template that represents a group of objects which share a common properties and relationships.

C++ was initially was called as c with classes.

There is no additional cost for using C++ hence it is efficient.

Major improvements over C:

Stream I/O

Strong typing

Inlining

Default argument values

Parameter passing by reference

OOP advantages.

OOPS principles :OOP is a methodology characterized by the following concepts.

1) *Encapsulation* – The process of binding data members(variables, properties) and member functions(methods) into a single unit. A class is the best example.

2) *Abstraction* – It refers to represent necessary features without including more details or explanation. Data abstraction is a programming technique that relies on the separation of interface and implementation. Example when we press a character it appears on the screen but we don’t know what is happening internally.
3) *Inheritance* – The mechanism old deriving a new class from old class is called inheritance. The old class is known as base/super/parent class while the new class is called as derived/sub/child class. This is the most powerful feature of OOP.
4) *Polymorphism* – It means the ability to take more than one form. Ex: function overloading.
   + is used for concatenation and its can be used to add 2 numbers.