

What is OOP? List OOP concepts

What is OOP?

Object Oriented Programming is viewed as a collection of objects. It is used to structure the software program into simple reusable code.

Class:

Class is a collection of a data member (variables) and member function with its behavior.

Class is a blueprint or a template to describe the properties and behavior of the objects.

Object :

An object is the basic unit of OOP which is accessed by its properties called data member & member function.

It creates the memory for the class.

Encapsulation:

A wrapping up of data and functions into a single unit is called Encapsulation.

IT hide/include private access of data member & member function.

Abstraction:

Abstraction is the representation of the essential features of an object. Also called data hiding.

Polymorphism:

An ability to take one name having many different forms.

Compile time Polymorphism : (Operator Overloading)

Method name should be same in single class but its behavior (Arguments & Data type) is different.

Run time Polymorphism (Operator Overriding)

Method should be same in super class and sub class but its behavior is different.

Inheritance:

One class (Super, Base) inherits the properties of another class (Sub, Derived).

Types of Inheritance:

- Single Inheritance

- Multilevel Inheritance

- Hierarchical Inheritance

- Hybrid Inheritance

- Multiple Inheritance