**What is object – oriented programming?**

The word object-oriented is the combination of two words i.e. object and oriented. the dictionary meaning of the object is an article or entity that exists in the real world. The meaning of oriented is interested in a particular kind of thing or entity.

**Object oriented programming(OOP) is a programming language model** organized around objects rather than “actions” and data rather than logic.

It is not a programming language or a tool it is just a model or style we use to write your code.

It is the most popular programming model among developers. It is well suited for programs that are large, complex, and actively updated or maintained. It simplifies software development and maintenance by providing major concepts such as **abstraction, inheritance, polymorphism, and encapsulation.** These core concepts support OOP.

**There are four pillars on which oop rests.**

* Encapsulation (Grouping of information)
* Abstraction (hiding of information)
* Inheritance (Sharing of information)
* Polymorphism (Redefining of information)

**Encapsulation**

Encapsulation: is a mechanism that allows us to bind data and functions of a class into an entity. It protects data and functions from outside interference and misuse. Therefore, it also provides security. A class is the best example of encapsulation.

Class

{

Data members

+

Methods (behavior)

}

To avoid name conflict we use encapsulation

**Abstraction**

The concept allows us to hide the implementation from the user but shows only essential information to the user.

**Inheritance**

The concept allows us to inherit or acquire properties of an existing class(parent class) into a newly created class(child class). It is known as inheritance. It provides code reusability.

**Polymorphism**

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**Person:-**

1. Employee role()
2. Father role()
3. Husband role()