**Object Oriented Programming system**:

Simula is considered the first object oriented programming language.

Smalltalk is considered the first truly objects oriented-programming language.

* Object.
* Class.
* Inheritance.
* Polymorphism.
* Abstraction
* Encapsulation.

**Object**:

Object means real world entity such as employee, computer and car etc…..

Object oriented programming is a methodology or paradigm (pattern) to design a program using classes and objects.

Any entity that has state and behavior is known as an object. It can be physical and logical.

An object can be defined as an instance of a class. An object contains an address and takes up some space in memory. Objects can be communicated without knowing the details of each other.

**Class**:

A Class can also be defined as a blueprint from which you can create an individual object. Class is does not consumes any space.

**Inheritance**:

When one object acquires all the properties and behaviors of a parent object, it is known as inheritance. it provides code reusability. it is used to achieve runtime polymorphism .

**Polymorphism**:

If one task is performed in different ways, it is known as polymorphism. For example: to convince the customer differently.

In java, we can use these method overloading and method overriding to achieve polymorphism.

**Abstraction**:

Hiding internal details and showing functionality is known as Abstraction. For example: phone call , we don’t know the internal processing.

**Encapsulation**:

Binding (wrapping) code and data together into a single unit are known as encapsulation. For example a capsule, it is wrapped with different medicines.