Object: An object in java is the physical as well as a logical entity, whereas, a class in java is a logical Entity only.

* It has State, Behaviour, Identity...

For example, if we have a keyboard, its state means its brand, material from which it is build, etc…

And its behaviour means functionality as in it is use to type and for typing.

For Example, Pen is an object. Its name is Reynolds; colour is white, known as its state. It is used to write, so writing is its behaviour.

* An object is an instance of a class

It means a class is a template or blueprint from which objects are created. Moreover, Object defines itself as;

1. A real-world entity.
2. A runtime entity.
3. Entity which has state and behaviour.
4. It is an instance of a class.

Polymorphism

If *one task is performed in different ways*, it is known as polymorphism. For example: to convince the customer differently, to draw something, for example, shape, triangle, rectangle, etc.

Abstraction:

Abstract is a process of hiding the implementation details and showing only functionality to the user.

In other words, if we are using a mouse to move the pointer to a certain direction, we don’t know what actually is happening inside a mouse right?? But we know that if we move it, it functions as it is made to do!!!

Inheritance: Inheritance in java is a mechanism in which one object acquires all the properties and behaviours of a parent object. It is an important part of OOPs.

The idea behind inheritance in java is that you can create new classes that are build upon existing classes. When you inherit from an existing class, you can reuse methods and fields of the parent class. Moreover, you can add new methods and fields in your current class also.

Inheritance represents the IS- A relationship which is also known as a parent-child relationship.

Terms used in Inheritance:

* **Class:** A class is a group of objects which have common properties. It is a template or blueprint from which objects are created.
* **Sub Clas­­­s/Child Class:** Subclass is a class which inherits the other class. It is also called a derived class, extended class, or child class.­
* **Super Class/Parent Class:** Superclass is the class from where a subclass inherits the features. It is also called a base class or a parent class.
* **Reusability:** As the name specifies, reusability is a mechanism which facilitates you to reuse the fields and methods of the existing class when you create a new class. You can use the same fields and methods already defined in the previous class.

The extends keyword indicates that you are making a new class that derives from an existing class. The meaning of “extends” is to increase the functionality.