

25/02/22

## Java programs

- 1) Factorial
- 2) Prime number
- 3) Fibonacci series
- 4)

## OOPS concepts:-

Object oriented programming (OOP) is a style of programming characterized by the identification of classes & objects closely linked with the methods (function) with which they are associated. It also includes ideas of a H.

## 2) Polymorphism:-

Ability to process objects differently on the basis of their class and datatypes.

### Types:-

- I) Compile time polymorphism
- II) Runtime polymorphism.

## 3) Inheritance:-

It is an interface and we are defining a reference variable (driver) whose return type is an interface. Now, any object we assign is an to it must be an interface of a class.

## 4) Abstract class:-

They are essential to providing an abstraction to the code to make it reusable and extendable. For eg; A vehicle parent class with motorbike and truck inherited from, it is an abstract class, that allows more vehicles to be added.



### 5) Multiple inheritance and multi-level inheritance

- The difference is that multiple inheritance is when a class inherits from many classes, while multi-level inheritance is that inheriting from a derived class making that derived class as a base class for a new class.

### 6) Is multiple inheritance possible in Java.

When one class ~~inherits~~ extends more than one class, then it is called as multiple inheritance.

For eg., class C extends class A and class B, then it is multiple inheritance. and it is not possible in Java.

### 7) Keyword for inheritance:-

- Extend is a keyword used for inheritance.

### 8) Difference b/w class & inheritance:-

A class describes the attributes and behaviours of an object. An interface contains behaviours that a class implements.

A class may contain abstract methods, concrete methods. An interface contains only abstract class.

### 9) Keyword for interface class:-

- Implements keyword used for interface class.

### 10) Difference b/w class and abstract class:-

- Abstract can have static fields and static methods, like other classes. An abstract class can't be declared as final. Only abstract class can have abstract methods.