ABSTRACT CLASSES

What is an Abstract Class?

- There are two types of classes **Abstract class and Concrete class**
- If **abstract** keyword is used before the class then it is an **Abstract Class** if nothing is written before class then it is a **Concrete class**
- Object of an Abstract class cannot be created but object of Concrete class can be created
- reference of abstract class is allowed

Example program

```
//asuper bstract class

abtract class Super

{
  Super()
  {
   System.out.println("Super");
  }
  void meth1()
  {
   System.out.println("meth1");
  }
  abstract void meeth2();
}

//concrete class
class sub extends Super
{
  Void meth2()
  {
   System.out.println("meth2");
  }
}
class test
{
   public static void main()
   {
     Super s1; // reference of abstract is allowed
     sub s2 =new sub();
   }
}
```

- Method which is not having a body is known as **Abstract method,** the method must be declared as abstract
- The abstract method is **undefined** method
- A class is Abstract class if at least one of the methods is abstract
- If any other class inherits abstract class then that class also becomes abstract class but to become a concrete class the subclass must override the undefined method
- A class becomes useful if it overrides all the methods of abstract class
- Abstract classes are used for imposing standards and sharing methods
- Sub classes are meant for following standards

➢ **Do's and Don'ts of Abstract Class**

- An Abstract class cannot be final because if it is made final then it cannot be extended whereas **abstract class is meant for inheritance**
- An Abstract method cannot be final because if it made final then it cannot be overridden whereas **Abstract method is meant for overriding**
- Abstract Class and method can neither be final nor static
- A Sub class must override an abstract method or else it will become abstract class