**Abstraction**

* The process of hiding implementation details and showing only functionality to user is called Abstraction.
* Ex: sending SMS where we  type the text and send the message. But  don't know the internal processing about the message delivery.

Ways to achieve Abstraction:

There are 2 ways to achieve abstraction. They are:

1.Abstract class (0 to 100%)

2.Interface (100%)

Abstract class:

* A class which is declared as abstract is known as an **abstract class**.
* An abstract class must be declared with an abstract keyword.
  + Ex: abstract class P {}
* It can have abstract and non-abstract methods.
* It needs to be extended and its method is implemented.
* It cannot be instantiated.
* It can have constructors, static methods , final methods .
* It is not applicable to variables.

Abstract method:

* Method which is declared as abstract and does not have implementation is known as an abstract method.

Ex: abstract void printStatus()

* Abstract methods should be  defined in child class using extends

 Ex:

abstract class Shape

{

abstract void circle();//abstract method

public void rectangle()//normal method

{

System.out.println(“rectangle”);

}

class Test extends Shape{

Public void circle()

{

System.out.println(“circle”);

}}

Class Main() {

public static void main(String args[]) {

Test obj=new Test();

Obj.circle();

Obj.rectangle();

}}

Advantages :

1. Avoids code duplication
2. increases reusability.
3. Increase the security of an application