**Abstract class in Java**

A class which is declared with the abstract keyword is known as an abstract class in [Java](https://www.javatpoint.com/java-tutorial). It can have abstract and non-abstract methods (method with the body).

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

Another way, it shows only essential things to the user and hides the internal details, for example, sending SMS where you type the text and send the message. You don't know the internal processing about the message delivery.

There are two ways to achieve abstraction in java

1. Abstract class (0 to 100%)
2. Interface (100%)

### Abstract class in Java

abstract class Bike{

  abstract void run();

}

class Honda4 extends Bike{

void run(){System.out.println("running safely");}

public static void main(String args[]){

 Bike obj = new Honda4();

 obj.run();

}

}

Eg2…………………………………………….

abstract class Shape{

abstract void draw();

}

//In real scenario, implementation is provided by others i.e. unknown by end user

class Rectangle extends Shape{

void draw(){System.out.println("drawing rectangle");}

}

class Circle1 extends Shape{

void draw(){System.out.println("drawing circle");}

}

//In real scenario, method is called by programmer or user

class TestAbstraction1{

public static void main(String args[]){

Shape s=new Circle1();//In a real scenario, object is provided through method, e.g., getShape() method

s.draw();

}

}

abstract class Bank{

abstract int getRateOfInterest();

}

class SBI extends Bank{

int getRateOfInterest(){return 7;}

}

class PNB extends Bank{

int getRateOfInterest(){return 8;}

}

class TestBank{

public static void main(String args[]){

Bank b;

b=new SBI();

System.out.println("Rate of Interest is: "+b.getRateOfInterest()+" %");

b=new PNB();

System.out.println("Rate of Interest is: "+b.getRateOfInterest()+" %");

}}