## Program 4

Develop a Java program to create an abstract class named Shape that contains two integers and an empty method named printArea(). Provide three classes named Rectangle, Triangle and Circle such that each one of the classes extends the class Shape. Each one of the classes contain only the method printArea() that prints the area of the given shape.

```
named shape that contains two integers
method named parintArea (). Provide theree
Rectargle, Triangle and circle such that each one of the
classes extends the class shape. Each one of the classes
contain only the method printAneal ) that is
 class shappy
 int dimitalinaly
 abstract class shape
 int dim 1, dim 2;
 shape (int x, int y) {
 abotract double frintAreal);
 class Rectargle extends shape?
 super (a, b);
 Class Triangle extends Shape (
 supe of (a, b);
  class cincle extends shape {
cincle (int a, int b) {
```

super (a, b); double print Area () { neturn 3.14 \* dimi \* dimi; class Abstract Demol public static void main (string SSEJ) { Rectangle & = new Rectangle (100,240); Triangle t = New Triangle (10, do); cincle (= new cincle (10,0); System. out println ("Arrea of Rectangle: "+ 21- PrintAreal ¿ System out println ("Anea of Thiangle ?"+ t - printAnca () System-out println ("Area of circle: "+ c. parint Area()); rectangle: 24000 triangle: Anea of cincle: 314.0 (5) Develop a Java Pasagram to create a class Bank that maintains two kinds of account for its customers, one called savings account and the other curvent account. The savings account provides compound between interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. Curvient account holders should also maintain a minimum balance and if the balance falls below this level, a sofwice charge is imposed. Create a class Account that stones customer name, account number and type of account. Forom this desire the classes (we -acct and sav-acct to make them more specific to their order to achieve the tollowing tasks

```
abstract class Shape{
int dim1,dim2;
Shape(int x,int y){
dim1=x;
dim2=y;
abstract double printArea();
}
class Rectangle extends Shape{
Rectangle(int a,int b){
super(a,b);
double printArea(){
return dim1*dim2;
}}
class Triangle extends Shape {
Triangle(int a,int b){
super(a,b);
}
double printArea(){
return 0.5*dim1*dim2;
}
class Circle extends Shape{
Circle (int a,int b){
super(a,0);
}
double printArea(){
return 3.14*dim1*dim1;
}
```

```
class AbstractDemo {
  public static void main(String ss[]) {
    Rectangle r=new Rectangle(100,240);
    Triangle t=new Triangle(10,20);
    Circle c =new Circle(10,0);
    System.out.println("Area of rectangle:"+r.printArea());
    System.out.println("Area of triangle:"+t.printArea());
    System.out.println("Area of circle:"+c.printArea());
}
```

```
D:\24BMSCE>javac AbstractDemo.java

D:\24BMSCE>java AbstractDemo
Area of rectangle:24000.0
Area of triangle:100.0
Area of circle:314.0

D:\24BMSCE>
```