**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 contains only the method printArea( ) that prints the area of the given shape.**

import java.util.\*;

abstract class Shape {

public int x,y;

public abstract void printArea();

}

class Rectangle1 extends Shape {

public void printArea() {

float area;

area= x \* y;

System.out.println("Area of Rectangle is " +area);

}

}

class Triangle extends Shape {

public void printArea() {

float area;

area= (x \* y) / 2.0f;

System.out.println("Area of Triangle is " + area);

}

}

class Circle extends Shape {

public void printArea() {

float area;

area=(22 \* x \* x) / 7.0f;

System.out.println("Area of Circle is " + area);

}

}

public class AreaOfShapes {

public static void main(String[] args) {

int choice;

Scanner sc=new Scanner(System.in);

System.out.println("Menu \n 1.Area of Rectangle \n 2.Area of Triangle \n 3.Area of Circle ");

System.out.print("Enter your choice : ");

choice=sc.nextInt();

switch(choice) {

case 1: System.out.println("Enter length and breadth for area of rectangle : ");

Rectangle1 r = new Rectangle1();

r.x=sc.nextInt();

r.y=sc.nextInt();

r.printArea();

break;

case 2: System.out.println("Enter breadth and height for area of triangle : ");

Triangle t = new Triangle();

t.x=sc.nextInt();

t.y=sc.nextInt();

t.printArea();

break;

case 3: System.out.println("Enter radius for area of circle : ");

Circle c = new Circle();

c.x = sc.nextInt();

c.printArea();

break;

default:System.out.println("Enter correct choice");

}

}

}

