Lab program-4

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

```
import java.util.Scanner;
abstract class shape
{
```

```
abstract class shape
{    int a, b;
     abstract void printArea();

     void set ()
     {   Scanner ss = new Scanner (system.in);
         System.out.println ["enter the height and
         breath");
         a = ss.nextInt();
         b = ss.next Int ();
     }
}

Class Rectangle extends shape
{   void print Area() {
        System.out.println ("the area of rectangle
    " + (a * b) }

Class   Triangle extends shape
{   void print Area(){
    system out println ["The area of Triangle is ;"
    + (a * b * 0.5) }

Class circle extends shape
{   void print Area()
{ Scanner ss = new Scanner (system.in);
    system out println ["Enter the radius;");
    a = ss.next Int ();
System.Out print ln/"the area of circle is" +
        (3.14 * a * a));
} }

class main - Abstract
{ public static void main (String xx[])
   {   Rectangle Rec = new Rectangle ();
       rec. set ();

       Rec print Area ();
```

```
Triangle tri = new Triangle();
   tri.set();
   tri.print Area();
   Circle cir = new circle();
   cir.print Area();
   }
}
```

output.

enter the height and breath:
10
5.

the area of rectangle is :50
enter the height and breath:
5
8

area of triangle is : 20.0
enter the radius :
5
the area of circle is :78.5.

```
08-12-2022  19:26              834 Rectangle.class
08-12-2022  19:26              237 shape.class
02-12-2022  18:00              451 student.class
02-12-2022  16:25              823 studentsgpa.java
30-11-2022  16:51              611 timeprogram.java
08-12-2022  18:31            1,046 trial.java
08-12-2022  19:26              844 Triangle.class
08-12-2022  18:02            1,022 zombie.java
              39 File(s)      4,352,514 bytes
               2 Dir(s)  918,716,952,576 bytes free

C:\Users\ADMIN\Desktop\oojlab>javac Lab4_java.java

C:\Users\ADMIN\Desktop\oojlab>java area
enter the height and breadth:
4
8
the area of rectangle is:32
enter the height and breadth:
10
4
the area of triangle is:20.0
enter the height and breadth:
20
10
enter the radius:
5
the area of circle is:78.5

C:\Users\ADMIN\Desktop\oojlab>
```