EX NO:5	AREA CALCULATOR
DATE:19/09/19	

AIM:

To calcualte the area of rectangle,triangle,circle using abstract class

REQUIREMENTS:

Write a Java Program to create an abstract class named Shape that contains two integers and an empty method named print Area(). 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 print Area () that prints the area of the given shape.

ALGORITHM:

step1:To declare a package as area calciulater in which the classes are shape triangle,rectangle,circle,calculation

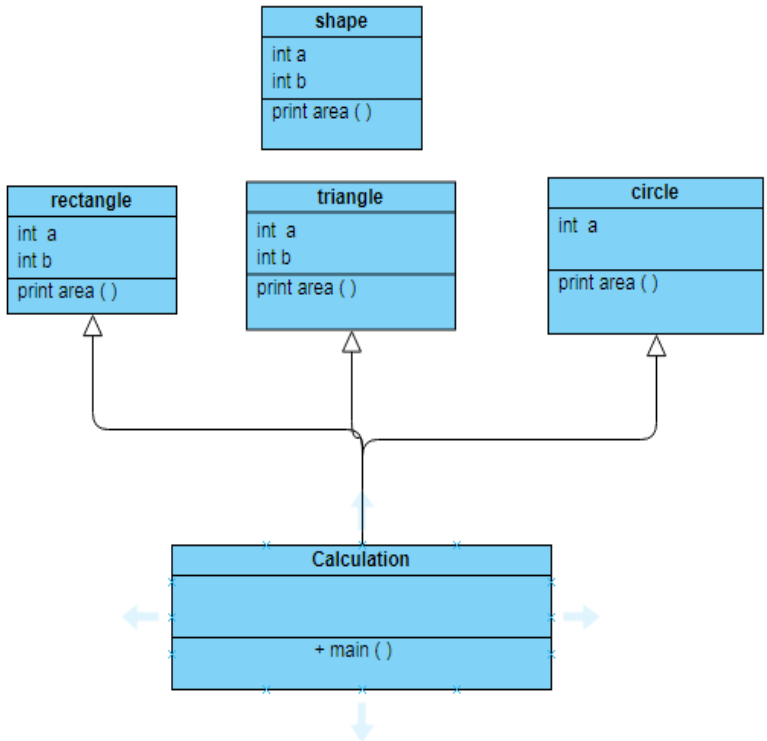
step2: To calculate area of rectangle
To calculate area of triangle
Tocalculate area of circle
declare package as area calculater

step3: Declare the classes as shape which is abstract class

step4:Declare the remaining class shape circle ,triangle,rectangle extend from abstract class

step5:In the calculation class input is taken by user and area is calculated

CLASS DIAGRAM:



PROGRAM:

```
/*saveetha engineering college
 * developed by
 * suriya kumar
 * 212217105057s*/package shapeclass;

public abstract class Shape {
        protected int a;
        protected int b;
abstract public void printArea();
}
import java.util.Scanner;

public class Triangle extends Shape {
public Triangle(int h,int b) {
        super.a=h;
        super.b=b;
}
public void getinput() {
         Scanner sc=new Scanner(System.in);
         System.out.println("For the Area of Triangle Enter the height and base");
         a=sc.nextInt();
         b=sc.nextInt();

}

public void  printArea() {
         double Areaoftriangle;
         Areaoftriangle=0.5*a*b;
         System.out.println("The area of Triangle is"+Areaoftriangle);
}
}

import java.util.Scanner;


public class Rectangle extends Shape{
        public Rectangle(int l,int b) {


           super.a=l;
                 super.b=b;
        }

public void printArea() {

         double Area;
         Area=a*b;
         System.out.println("The area of the given Rectangle is"+Area);
}

}
```

```
import java.util.Scanner;

public class Circle extends Shape {



        public Circle(int r) {


           super.a=r;

        }


public void printArea() {

         double Area;
         Area=3.14*a*a;
         System.out.println("The Area of the given circle is"+Area);
}

}
```

OUTPUT:

```
The area of the given Rectangle is75.0
For the Area of Triangle Enter the height and base
12 23
The area of Triangle is138.0
The Area of the given circle is78.5
```

RESULT:

Thus,the program for area of rectangle,triangle,circle using abstract class was dveloped successfully