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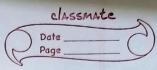## LAB-4

Develop a JAVA program to create an abstract class named shape that contain two integer and an empty method named print Area(). Provide three classes named Rectangle, Triangle, Circle such that each one of the class extends the class shape. Each one of the classes contain only the method print Area() that print the area of the given shape.

```java
import java.util.*;

class InputScanner
{
    Scanner sc;
    InputScanner()
    {
        sc = new Scanner(system.in);
    }
}

abstract class shape extends InputScanner
{
    double a;
    double b;
    abstract void getInput();
    abstract void displayArea();
}

class Rectangle extends shape;
{
    void getInput()
    {
        System.out.println("Enter the length and breath");
        a = sc.nextDouble();
        b = sc.nextDouble();
    }
```

```java
    void displayArea()
    {
        system.out.println("Area of rectangle is :" + (a+b));
    }
}
class Triangle extends shape
{
    void getInput()
    {
        System.out.println("Enter length and height:");
        a = sc.nextDouble();
        b = sc.nextDouble();
    }
    void displayArea()
    {
        System.out.println("Area of triangle is: " + (a*b*0.5));
    }
}

class Circle extends shape
{
    void getInput()
    {
        system.out.println("Enter the radius:");
        a = sc.nextDouble();
    }
    void displayArea()
    {
        system.out.println("Area of circle:" + (a* a*3.14));
    }
}
```

```
Class shapemain
{
public static void main (string [] args)
{
    Rectangle r= new Rectangle();
    Tringle t= new Triangle();
    Circle c = new circle();
    r. getInput();
    r. displayArea();
    t.getInput();
    t. diplayArea();
    c.getInput();
    c.diplayArea();
}
```

Output:-
Enter the length and breath:
10
5
Area of rectangle is : 50

Enter the length and height:
10
10
Area of triangle is : 20
Enter the radius
10
Area of circle:
314.

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