

QUESTION AND CODE

Q) Programme to find area of shapes. (Circle, Rectangle, Triangle)

import java.util.Scanner;
abstract class Shape

{
 int x, y;
 double area;
 abstract void thinkArea();
}

class Rectangle extends Shape

{
 void thinkArea()
 {
 area = 0.5 * x * y;
 System.out.println("Area of triangle is: " + area);
 }
}

class Circle extends Shape

{
 void thinkArea()
 {
 area = 3.14 * x * x;
 System.out.println("Area of circle is: " + area);
 }
}

class Area

{

```
System.out.println("Ends radius:");  
c.g = s.nextInt();  
c.printArea();
```

```
}
```

```
else if (fig.equals("Circle") || fig.equals("circle") || fig.equals(  
    ("Circle"))
```

```
{
```

```
    System.out.println("Ends radius:");
```

```
    c.r = s.nextInt();
```

```
    c.printArea();
```

```
}
```

```
else
```

```
{
```

```
    System.out.println("WRONG SHAPE ENTERED!!!");
```

```
}
```

```
}
```

```
}
```

```

public static void main(String args[])
{
    Rectangle r = new Rectangle();
    Triangle t = new Triangle();
    Circle c = new Circle();

    for(int i=0; i<4; i++)
    {
        System.out.println("Enter the shape whose area is to be found out:");
        Scanner s = new Scanner(System.in);
        String fig = s.next();

        if((fig.equals("rectangle") || fig.equals("Rectangle") ||
            fig.equals("RECTANGLE")))
        {
            System.out.println("Enter length:");
            r.l = s.nextInt();
            System.out.println("Enter breadth:");
            r.b = s.nextInt();
            r.printArea();
        }
        else if((fig.equals("triangle") || fig.equals("Triangle") ||
            fig.equals("TRIANGLE")))
        {
            System.out.println("Enter height:");
            t.h = s.nextInt();
        }
    }
}

```

OUTPUT

```

Enter the shape whose area is to be found out: rectangle
Enter length:
3
Enter breadth:
4
Area of rectangle is: 12.0
Enter the shape whose area is to be found out: triangle
Enter height:
4
Enter breadth:
5
Area of triangle is: 10.0
Enter the shape whose area is to be found out: circle
Enter radius:
4
Area of circle is: 50.24

```