

abstract class shape
double

develop a java program to create an abstract class named shape that contains two integers and an imp-named rectangle, Triangle and circle such that each one of the class extends the class shape. Each one of the classes extends the class shape. Each one of the classes contains only the method print Area() that abstract class shapes

of abstract class shape

```
{ double a, b;  
  shape (int x, int y)
```

```
{  
  a = x;
```

```
  b = y;
```

```
}  
abstract void print Area();
```

```
}
```

```
class rectangle extends shape {
```

```
  rectangle (int x, int y)
```

```
{  
  super (x, y);
```

```
}
```

```

void print Area ()
{
    system.out.println ("Area of rectangle is"
        + (a*b));
}
}

```

```

class Triangle extends shape {
    Triangle (int x, int y)
    {
        super(x,y);
    }
    void print Area()
    {
        system.out.println ("Area of triangle is"
            + (0.5*a*b));
    }
}

```

```

class circle extends shape {
    circle (int x, int y)
    {
        super(x,y);
    }
    void print Area()
    {

```

```

        print.out.println ("Area of circle is" + 3.14*a*b);
    }
}

```

```

class shape {
public static void main (String args[])
{
    rectangle r1 = new rectangle (10, 20);
    triangle t1 = new triangle (3, 10);
    circle c1 = new circle (3, 0);
    shape s;
    s = r1;
    s.printArea();
    s = t1;
    s.printArea();
    s = c1;
    s.printArea();
}
}

```

Output

Enter height and width of rectangle
30 40

Area of Rectangle is 1200

Enter height and base of rectangle
30 60

Area of Triangle is 900

Enter radius of circle
50

Area of circle is 7850


```
Command Prompt
Microsoft Windows [Version 10.0.19043.2251]
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C:\Users\bmsce>cd C:\Users\bmsce\Desktop\1BM21CS036

C:\Users\bmsce\Desktop\1BM21CS036>javac lab4.java

C:\Users\bmsce\Desktop\1BM21CS036>java lab4
Enter height and width of rectangle
20 50
Area of Rectangle is 1000
Enter height and base of triangle
60 50
Area of Trianle is 1500.0
Enter radius of Circle
40
Area of Circle is 5024.0

C:\Users\bmsce\Desktop\1BM21CS036>
```