

lab Program 4

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

abstract class Shape

{

Double length;

Double breadth;

Double radius;

Shape (double l, double b)

{

length = l;

breadth = b;

}

Shape (double (rad)

{

radius = rad;

}

abstract double area();

}

Class Rectangle extends Shape

{

Rectangle (double l, double b)

{

Super (l, b);

}

```

double area()
{
    return length * breadth;
}

```

```

class triangle extends Shape
{
    triangle (double l, double b)
    {
        super ( l, b);
    }
    double area()
    {
        return (length * breadth)/2;
    }
}

```

```

class circle extends Shape
{
    circle (double rad)
    {
        super (rad);
    }
    double area()
    {
        return 3.14 * radius * radius;
    }
}

```

```

class areas {
    public static void main (String[] args)
    {
        Rectangle r = new Rectangle(2,2);
        triangle t = new triangle ( 3,3);
        circle c = new circle (2);
    }
}

```

```
System.out.println("area of rectangle : "+
                    r.area());
```

```
System.out.println("area of triangle : "+t.area());
```

```
System.out.println("area of circle : "+c.area());
```

```
}
```

OUTPUT:

area of rectangle : 4.0

area of triangle : 4.5

area of circle : 12.56

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Command Prompt



Microsoft Windows [Version 10.0.22621.755]
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C:\Users\Aisha Taffazul>cd C:\Users\Aisha Taffazul\Desktop\notes\3rd sem\java programs\shapes

C:\Users\Aisha Taffazul\Desktop\notes\3rd sem\java programs\shapes>javac lab_program_4.java

C:\Users\Aisha Taffazul\Desktop\notes\3rd sem\java programs\shapes>java areas

area of rectangle :4.0

area of triangle :4.5

area of circle : 12.56

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