

**Don Bosco Institute of Technology, Kurla(W)**  
**Department of Electronics and Tele-Communication Engineering**  
**ECL304 - Skill Lab: C++ and Java Programming**  
**Sem III**  
**2021-22**

<b>Lab Number:</b>	<b>9</b>
<b>Student Name:</b>	<b>Pratham Amare</b>
<b>Roll No :</b>	<b>23</b>

**Title:**

1. Write a java program to create an abstract class named Shape that contains two integers and an abstract 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.

**Learning Objective:**

Students will be able to implement abstract class and abstract method programs.

**Learning Outcome:**

- Understanding the abstraction concept and hiding of the unnecessary code.

**Course Outcome:**

<b>ECL304.4</b>	1. Implement different programming applications using packaging.
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**Theory:**

- Explain in details about necessity of data hiding in any application / project.
- Explain abstract class and abstract methods.

<b>Algorithm :</b>	
<b>Program:</b>	<pre>import java.util.*;  abstract class shape {     int x,y;      abstract void area(double x,double y); }  class Rectangle extends shape</pre>

**Faculty: Ms. Deepali Kayande**

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```
{  
    void area(double x,double y)  
    {  
        System.out.println("Area of rectangle is  
        :"+(x*y));  
    }  
}  
  
class Circle extends shape  
{  
    void area(double x,double y)  
    {  
        System.out.println("Area of circle is  
        :"+(3.14*x*x));  
    }  
}  
  
class Triangle extends shape  
{  
    void area(double x,double y)  
    {  
        System.out.println("Area of triangle is  
        :"+(0.5*x*y));  
    }  
}  
  
public class AbstactDDemo  
{  
    public static void main(String[] args)  
    {  
        Rectangle r=new Rectangle();  
        r.area(2,5);  
    }  
}
```

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	<pre>Circle c=new Circle(); c.area(5,5); Triangle t=new Triangle(); t.area(2,5); } }</pre>
<b>Input given:</b>	
<b>Output Screenshot:</b>	<pre>Area of rectangle is :10.0 Area of circle is :78.5 Area of triangle is :5.0</pre>