

YASH GUPTA

1BM21CS251

2 DEC 2022

WEEK 4

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.

INPUT:

```
abstract class shape{
    int a,b;
    shape(int x, int y){
        a=x;
        b=y;
    }
    shape(int x){
        a=x;
    }
    public void printArea(){
    }
}
```

```
class Rectangle extends shape{
    Rectangle(int x,int y){
        super(x,y);
    }
}
```

```
}  
public void printArea(){  
    System.out.println("The area of Rectangle is: "+(b*a));  
}  
}
```

```
class Triangle extends shape{  
    Triangle(int x,int y){  
        super(x,y);  
    }  
    public void printArea(){  
        System.out.println("The area of Triangle is: "+(b*a*0.5));  
    }  
}
```

```
class Circle extends shape{  
    Circle(int x){  
        super(x);  
    }  
    public void printArea(){  
        System.out.println("The area of Circle is: "+(a*a*3.14));  
    }  
}
```

```
public class exp4 {  
    public static void main(String args[]){  
        Triangle t1=new Triangle(30, 40);
```

```
Rectangle r1=new Rectangle(40, 50);  
Circle c1=new Circle(10);  
t1.printArea();  
r1.printArea();  
c1.printArea();  
}  
}
```

OUTPUT:

```
C:\Users\Admin\Desktop\1bm21cs254>javac exp4.java  
C:\Users\Admin\Desktop\1bm21cs254>java exp4  
The area of Triangle is: 600.0  
The area of Rectangle is: 2000  
The area of Circle is: 314.0
```