

Lab program 4 :- week 8:-

1) abstract class shape

```
{  
    int side1, side2;  
    double area;  
    abstract void printArea();  
}
```

class Rectangle extends shape.

```
{  
    Rectangle (int l, int b)  
    {
```

```
        side1 = l;
```

```
        side2 = b;
```

```
    }
```

```
    void printArea()
```

```
    {
```

```
        area = side1 * side2;
```

```
        System.out.println("The area of the Rectangle is: " + area);
```

```
    }
```

```
}
```

class Triangle extends shape

```
{
```

```
    Triangle (int h, int b)
```

```
    {
```

```
        side1 = h;
```

```
        side2 = b;
```

```
    }
```

```
    void printArea()
```

```
    {
```

```
        area = 0.5 * side1 * side2;
```

```
        System.out.println("The Area of the Triangle is: " + area);
```

```
    }
```

```
}
```

```
class Circle extends Shape
```

```
{
```

```
    Circle(int r)
```

```
    {
```

```
        side1 = r;
```

```
    }
```

```
    void printArea()
```

```
    {
```

```
        area = 3.14 * side1 * side1;
```

```
        System.out.println("The Area of the Circle is: " + area);
```

```
    }
```

```
}
```

```
class ShapeMain
```

```
{
```

```
    public static void main(String args[])
```

```
    {
```

```
        Rectangle rect = new Rectangle(5, 6);
```

```
        rect.printArea();
```

```
        Triangle tri = new Triangle(5, 8);
```

```
        tri.printArea();
```

```
        Circle cir = new Circle(10);
```

```
        cir.printArea();
```

```
    }
```

```
}
```

```
The area of the Rectagle is: 30.0
The Area of the triangle is: 20.0
The Area of the Circle is: 314.0
```