Assignment -2. ● Write a Java program to create a class called Shape with a method called getArea().
● Create a subclass called Circle and create a constructor that takes the value of radius(int) as input parameter.
● Override the getArea() method.
● Create a class called square that takes an attribute length. Create a constructor that takes length as input.
● Override the getArea() method.
● Create a subclass of Shape called Rectangle that takes width and height as input to the constructor.
● Override the getArea() method to calculate the area of a rectangle. Instantiate and call getArea() method.

```
class Shape {
    public double getArea() {
        return 0.0; // Default implementation, to be overridden by subclasses
    }
}

class Circle extends Shape {
    private int radius;

    public Circle(int radius) {
        this.radius = radius;
    }

    @Override
    public double getArea() {
        return Math.PI * radius * radius;
    }
}

class Square extends Shape {
    private int length;

    public Square(int length) {
        this.length = length;
    }

    @Override
    public double getArea() {
        return length * length;
    }
}

class Rectangle extends Shape {
    private int width;
    private int height;

    public Rectangle(int width, int height) {
        this.width = width;
        this.height = height;
    }

    @Override
    public double getArea() {
        return width * height;
    }
}

public class Main {
```

```
    public static void main(String[] args) {
        Circle circle = new Circle(5);
        Square square = new Square(4);
        Rectangle rectangle = new Rectangle(6, 8);

        System.out.println("Area of Circle: " + circle.getArea());
        System.out.println("Area of Square: " + square.getArea());
        System.out.println("Area of Rectangle: " + rectangle.getArea());
    }
}
```

Output:

```
Area of Circle:78.53981633974483
Area of Square: 16.0
Area of Rectangle: 48.0
```