OOS - Lab 4

02/01/24

(Q) To make a class shape and execute the given instructions

```
abstract class Shape {
    protected int dim1;
    protected int dim2;

    public Shape(int dim1, int dim2) {
        this.dim1 = dim1;
        this.dim2 = dim2;
    }

    public abstract void printArea();
}

class Rectangle extends Shape {
    public Rectangle(int len, int wid) {
        super(len, wid);
    }

    public void printArea() {
        int area = dim1 * dim2;
        System.out.println("Area of Rectangle: " + area);
    }
}

class Triangle extends Shape {
    public Triangle(int base, int height) {
        super(base, triangle);
    }
```

```
    public void printArea() {
        double area = 0.5 * dim1 * dim2;
        System.out.println("Area of Triangle: " + area);
    }
}

class Circle extends Shape {
    public Circle(float rad) {
        super(rad, 0);
    }

    public void printArea() {
        double area = Math.PI * dim1 * dim2;
        System.out.println("Area of Circle: " + area);
    }
}

public class Main {
    public static void main(String args[]) {
        Rectangle rectangle = new Rectangle(5, 10);
        Triangle triangle = new Triangle(4, 6);
        Circle circle = new Circle(7);

        rectangle.printArea();
        triangle.printArea();
        circle.printArea();
    }
}
```

Sample Output

Area of Rectangle: 50
Area of triangle: 12.0
Area of circle: 153.93804002589854

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